



# Transportation Technical Memorandum No. 1

Date: October 24, 2018

To: City of Redding Project: Dignity Health Mercy Medical Center  
Redding - North State Pavilion

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Attn: Lily Toy

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Bruce Grove, SHN

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**Subject:** Henderson Road/Wilshire Drive Traffic Cut-Through Analysis

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## Introduction

GHD has prepared this memorandum to present the results from an analysis of the potential impacts that the development of the Dignity Health North State Pavilion project may have to Henderson Road and Wilshire Drive.

## Existing Conditions

Henderson Road and Wilshire Drive are two-lane undivided residential streets, connecting Parkview Avenue and Bechelli Lane south of the project site.

Henderson Road, from Parkview Avenue to Wilshire Drive, is within the City limits and is signed as a 25MPH zone. There are not any sidewalks along this road. The pavement on Henderson Road varies from approximately 21-feet to 30-feet wide.

Wilshire Drive, between Henderson Road and Bechelli Lane, is under a combination of City and County jurisdiction. Wilshire Drive does not have a posted speed limit. There are not any sidewalks along this road, with the exception of a very short section near Bechelli Lane. The pavement on Wilshire Drive varies from approximately 22-feet to 34-feet wide.

There are not any designated bicycle facilities along either street.

## Existing Traffic Volumes

24-Hour traffic counts were performed on Thursday, September 13, 2018 at two separate locations along this corridor. One count was performed on Wilshire Drive, between Birch Way and John Street. The second



24-Hour count was performed along Henderson Road, 300' south of Parkview Avenue. These daily traffic counts were used to produce the average daily traffic (ADT) and the AM and PM peak hour traffic flow. Of the two locations, the Wilshire Drive location had a higher daily traffic count of 731 vehicles, with an AM peak hour of 56 vehicles, and a PM peak hour of 68 vehicles. The Henderson Road location had a daily traffic count of 472 vehicles, an AM peak hour of 31 vehicles, and a PM peak hour of 47 vehicles. Therefore the traffic impact for the project is controlled by the Wilshire Drive traffic volumes. See Attachment 1 for the count summary for each location.

From the City of Redding Traffic Impact Analysis (TIA) Guidelines, the threshold for traffic on a residential local street is 2,000 vehicles per day and 180 vehicles per peak hour. Based on this criteria, Wilshire Drive existing peak hour traffic volumes do not exceed the TIA guideline volumes.

## Projected Traffic Volumes

The Traffic Impact Analysis Report (TIAR) for the project (Updated September 24, 2018) estimates that 8% of the project traffic will utilize Bechelli Lane to the south for coming/going to the project site. It is estimated that less than 1% of the project traffic will use the Henderson Road/Wilshire Drive cut-through route as a shortcut to/from Bechelli Lane. In order to ensure that this cut-through percentage is not underestimated, this memorandum analyzes a "worst-case" situation with 5% of the project traffic using this cut-through.

Taken from the project TIAR, the project is anticipated to generate 4,697 daily trips to/from the project site, with an AM Peak Hour volume of 311 trips, and 330 PM peak hour trips. Based on 5% of the project traffic using Wilshire Drive and Henderson Road as a cut-through, the ADT would increase by 235 vehicles, assuming half of the vehicles in both the eastbound and westbound directions. This would bring the ADT of the roadway to approximately 966 vehicles. The AM peak hour is projected to increase by 16 vehicles and the PM peak hour is projected to increase by 16 vehicles. This brings the AM peak hour to approximately 72 vehicles, and the PM peak hour to approximately 84 vehicles.

## Impact Assessment

Based on the above projected traffic volumes for Wilshire Drive, using 5% of the project traffic, Wilshire Drive will continue to operate well below the City of Redding's Traffic Impact Analysis (TIA) Guidelines thresholds of 2,000 vehicles per day and 180 vehicles per hour during the peak hours. Therefore the impacts from the project will be less than significant.

## Proposed Mitigation

Since the project does not cause significant impacts to the Henderson Road/Wilshire Drive corridor, traffic mitigation measures are not recommended.

# ATTACHMENT 1 - 24-HOUR COUNTS

Prepared by NDS/ATD

## VOLUME

Wilshire Dr Bet. Birch Way & John St

Day: Thursday  
Date: 9/13/2018

City: Redding  
Project #: CA18\_7291\_001

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	362	369	731		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			11	5	16
00:15			1	0	1	12:15			4	7	11
00:30			1	0	1	12:30			6	6	12
00:45			0	2	0	12:45			11	32	24
01:00			0	0	0	13:00			5	8	13
01:15			0	0	0	13:15			9	5	14
01:30			0	2	2	13:30			8	7	15
01:45			1	1	0	13:45			9	31	6
02:00			0	0	0	14:00			7	11	18
02:15			0	0	0	14:15			4	8	12
02:30			0	1	1	14:30			3	9	12
02:45			0	0	1	14:45			6	20	4
03:00			1	0	1	15:00			5	3	8
03:15			0	0	0	15:15			8	8	16
03:30			0	0	0	15:30			5	13	18
03:45			0	1	0	15:45			4	22	7
04:00			1	2	3	16:00			3	6	9
04:15			1	0	1	16:15			9	10	19
04:30			0	0	0	16:30			10	10	20
04:45			0	2	1	16:45			7	29	7
05:00			0	1	1	17:00			5	10	15
05:15			0	1	1	17:15			6	5	11
05:30			1	0	1	17:30			6	13	19
05:45			4	5	0	17:45			4	21	7
06:00			5	0	5	18:00			4	5	9
06:15			4	0	4	18:15			4	4	8
06:30			3	2	5	18:30			7	5	12
06:45			4	16	1	18:45			3	18	8
07:00			6	1	7	19:00			5	9	14
07:15			6	4	10	19:15			10	4	14
07:30			8	4	12	19:30			1	7	8
07:45			14	34	6	19:45			2	18	10
08:00			8	6	14	20:00			3	8	11
08:15			7	3	10	20:15			1	3	4
08:30			3	3	6	20:30			6	2	8
08:45			6	24	0	20:45			2	12	1
09:00			7	5	12	21:00			1	2	3
09:15			3	3	6	21:15			1	3	4
09:30			9	6	15	21:30			3	3	6
09:45			5	24	7	21:45			1	6	1
10:00			5	8	13	22:00			3	3	6
10:15			4	4	8	22:15			2	4	6
10:30			3	4	7	22:30			0	1	1
10:45			6	18	2	22:45			2	7	5
11:00			7	5	12	23:00			0	2	2
11:15			5	6	11	23:15			0	1	1
11:30			4	2	6	23:30			1	0	1
11:45			1	17	7	23:45			1	2	0
<b>TOTALS</b>			144	97	241	<b>TOTALS</b>			218	272	490
<b>SPLIT %</b>			59.8%	40.2%	33.0%	<b>SPLIT %</b>			44.5%	55.5%	67.0%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	362	369	731		
AM Peak Hour			07:30	09:30	07:15	PM Peak Hour			12:45	16:15	16:15
AM Pk Volume			37	25	56	PM Pk Volume			33	37	68
Pk Hr Factor			0.661	0.781	0.700	Pk Hr Factor			0.750	0.925	0.850
7 - 9 Volume	0	0	58	27	85	4 - 6 Volume	0	0	50	68	118
7 - 9 Peak Hour			07:30	07:15	07:15	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	37	20	56	4 - 6 Pk Volume	0	0	31	37	68
Pk Hr Factor	0.000	0.000	0.661	0.833	0.700	Pk Hr Factor	0.000	0.000	0.775	0.925	0.850

### VOLUME

Henderson Rd 300' S/O Parkview Ave

Day: Thursday  
Date: 9/13/2018

City: Redding  
Project #: CA18\_7291\_002

DAILY TOTALS					NB	SB	EB	WB	Total		
					239	233	0	0	472		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	1	5			6
00:15	0	0			0	12:15	1	3			4
00:30	0	0			0	12:30	4	3			7
00:45	0	1	1		1	12:45	7	13	6	17	13
01:00	0	0			0	13:00	3	5			8
01:15	0	0			0	13:15	3	4			7
01:30	1	0			1	13:30	5	3			8
01:45	0	1	1	1	1	13:45	4	15	4	16	8
02:00	0	0			0	14:00	5	3			8
02:15	0	0			0	14:15	5	7			12
02:30	0	1			1	14:30	5	7			12
02:45	0	0	1		0	14:45	6	21	3	20	9
03:00	0	0			0	15:00	1	4			5
03:15	0	0			0	15:15	1	2			3
03:30	0	0			0	15:30	7	9			16
03:45	1	1	0		1	15:45	3	12	6	21	9
04:00	2	0			2	16:00	5	5			10
04:15	1	0			1	16:15	4	7			11
04:30	0	0			0	16:30	7	4			11
04:45	1	4	0		1	16:45	4	20	6	22	10
05:00	0	0			0	17:00	8	7			15
05:15	2	0			2	17:15	1	9			10
05:30	2	0			2	17:30	5	4			9
05:45	0	4	0		0	17:45	5	19	6	26	11
06:00	2	1			3	18:00	2	3			5
06:15	0	0			0	18:15	4	9			13
06:30	5	1			6	18:30	1	3			4
06:45	2	9	1	3	3	18:45	1	8	4	19	5
07:00	6	1			7	19:00	3	4			7
07:15	5	0			5	19:15	3	4			7
07:30	4	0			4	19:30	3	2			5
07:45	6	21	3	4	9	19:45	1	10	3	13	4
08:00	5	1			6	20:00	2	4			6
08:15	5	1			6	20:15	2	2			4
08:30	4	4			8	20:30	2	3			5
08:45	4	18	1	7	5	20:45	0	6	1	10	1
09:00	4	4			8	21:00	2	2			4
09:15	0	1			1	21:15	1	1			2
09:30	5	5			10	21:30	1	4			5
09:45	7	16	1	11	8	21:45	2	6	2	9	4
10:00	4	0			4	22:00	1	2			3
10:15	1	1			2	22:15	0	3			3
10:30	5	6			11	22:30	1	0			1
10:45	6	16	3	10	9	22:45	2	4	1	6	3
11:00	1	6			7	23:00	2	1			3
11:15	1	3			4	23:15	0	0			0
11:30	6	3			9	23:30	0	0			0
11:45	5	13	3	15	8	23:45	0	2	0	1	0
<b>TOTALS</b>	103	53			156	<b>TOTALS</b>	136	180			316
<b>SPLIT %</b>	66.0%	34.0%			33.1%	<b>SPLIT %</b>	43.0%	57.0%			66.9%

DAILY TOTALS					NB	SB	EB	WB	Total
					239	233	0	0	472
AM Peak Hour	07:00	10:30			10:30	PM Peak Hour	16:15	15:30	16:15
AM Pk Volume	21	18			31	PM Pk Volume	23	27	47
Pk Hr Factor	0.875	0.750			0.705	Pk Hr Factor	0.719	0.750	0.783
7 - 9 Volume	39	11	0	0	50	4 - 6 Volume	39	48	87
7 - 9 Peak Hour	07:00	07:45			07:45	4 - 6 Peak Hour	16:15	16:30	16:15
7 - 9 Pk Volume	21	9	0	0	29	4 - 6 Pk Volume	23	26	47
Pk Hr Factor	0.875	0.563	0.000	0.000	0.806	Pk Hr Factor	0.719	0.722	0.783