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DRAFT
Focused Environmental Impact Report
Casa Blanca Elementary School Project
City of Riverside, Riverside County, California

State Clearinghouse Number 2018101073

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ACRONYMS AND ABBREVIATIONS

°C	Celsius
µg/m^3	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACP	Alternative Compliance Plan
ADA	Americans with Disabilities Act
ADT	average daily traffic
af	acre-foot
AFB	Air Force Base
AFY	acre-feet per year
AIA	Airport Influence Area
AIC	Archaeological Information Center
AICUZ	Air Installation Compatibility Use Zone
ALUC	Airport Land Use Commission
APCD	Air Pollution Control District
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQMD	Air Quality Management
ARB	California Air Resources Board
AST	aboveground storage tank
ATCM	Airborne Toxic Control Measures
AUSD	Alvord Unified School District
BAU	Business as Usual
BMP	Best Management Practices
BVOC	biogenic volatile organic compound
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal OSHA	California Occupational Health and Safety Administration
Cal/EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation

CAP	Climate Action Plan
CBC	California Building Standards Code
CCAA	California Clean Air Act
CCCC	California Climate Change Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEC	the California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CHL	California Historical Landmarks
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CPHI	California Points of Historical Interest
CPUC	California Public Utility Commission
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
DAMP	Riverside County Drainage Area Management Plan
dB	decibel
dBA	A-weighted decibel
DOE	United States Department of Energy
DOT	United States Department of Transportation
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
EPA	United States Environmental Protection Agency
EPAP	Economic Prosperity Action Plan
ESA	Endangered Species Act

FAR	floor area ratio
FCS	FirstCarbon Solutions
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GPCD	gallons per capita per day
GWh/y	gigawatt-hours per year
GWP	global warming potential
HCM6	Highway Capacity Manual 6
HDR	High Density Residential
HFC	hydrofluorocarbon
HOV/HOT	High Occupancy Vehicle/High Occupancy Toll
HRA	Health Risk Assessment
HRI	California Historic Resources Inventory
HVAC	heating, ventilation, and air conditioning
IPCC	United Nations Intergovernmental Panel on Climate Change
ISTEA	Intermodal Surface Transportation Efficiency Act
kW	kilowatts
lb/MWh	pound per megawatt hour
LCFS	Low Carbon Fuel Standard
L_{dn}	day/night average sound level
LED	light emitting diode
L_{eq}	equivalent sound level
LEV	Low-Emission Vehicle
LOS	Level of Service
LRFMP	Long Range Facilities Master Plan
MARB	March Air Reserve Base
MBTA	Migratory Bird Treaty Act
MDR	Medium Density Residential
MEP	maximum extent practicable
MFR	Multiple-Family Residential
mgd	million gallons per day
MLD	Most Likely Descendant
MMI	Modified Mercalli Intensity
MMT	million metric tons

mph	miles per hour
MPO	Metropolitan Planning Organizations
MT	metric tons
MTS	Metropolitan Transportation System
MW	megawatts
MWh	megawatt-hour
MXD	mixed-use development
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NF3	nitrogen trifluoride
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOC	Notice of Completion
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPC	Neighborhood Policing Center
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	ozone
OAL	Office of Administrative Law
OEHHA	California Office of Environmental Health Hazard Assessment
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PDF	Project Design Features
PFC	perfluorocarbon
Phase I ESA	Phase I Environmental Site Assessment
PM_x	particulate matter
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRIMP	Resource Impact Mitigation Program
PVC	polyvinyl chloride
RCPG	Regional Comprehensive Plan and Guide
RMC	Riverside Municipal Code

RMP	Risk Management Plan
RMS	root mean square
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RPU	Riverside Public Utilities
RRG	Riverside Restorative Growthprint
RTP	Regional Transportation Plan
RUSD	Riverside Unified School District
RWQCB	Regional Water Quality Control Board
SAMC	Sewer Authority Mid-Coastside
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SIP	State Implementation Plans
SLF	Sacred Lands File
SO_2	sulfur dioxide
SoCAB	South Coast Air Basin
SP	service populations
SR	State Route
SRO	School Recourse Officers
SWPPP	Storm Water Pollution Prevention Plan
State Water Board	State Water Resources Control Board
TAC	toxic air contaminants
TCM	transportation control measures
TDM	Transportation Demand Management
TDS	total dissolved solids
TDV	Time Dependent Valuation
Tg	teragram
therms/y	therms per year
TIA	Traffic Impact Analysis
TMA	Transportation Management Association
TMDL	Total Maximum Daily Load
TOD	Transit Oriented Development
TUMF	Transportation Uniform Mitigation Fee
UNFCCC	United Nations Framework Convention on Climate Change
USACE	United States Army Corps of Engineers

USFWS	United States Fish and Wildlife Service
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
VOC	volatile organic compounds
WDR	Waste Discharge Requirements
WMWD	Western Municipal Water District
WQMP	Water Quality Management Plan
WRCOG	Western Riverside Council of Government
ZEV	zero-emission vehicle

EXECUTIVE SUMMARY

Purpose

This Draft Focused Environmental Impact Report (Draft Focused EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines to evaluate the potential environmental impacts associated with the implementation of the Casa Blanca Elementary School Project (State Clearinghouse No. 2018101073). This document has been prepared in conformance with CEQA (California Public Resources Code [PRC], § 21000, et seq.) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, § 15000, et seq.).

The purpose of this Draft Focused EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft Focused EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

Proposed Project Location

The proposed project site is located in the City of Riverside, in Riverside County, California (Exhibit 2-1). The site is specifically within the Casa Blanca Neighborhood on the northern side of Lincoln Avenue and Sonora Place (Exhibit 2-2) at 7351 Lincoln Avenue (Assessor's Parcel Number [APN]: 230-360-001). The KPRO 1570 AM radio station transmitter building and antenna system previously occupied the 9.8-acre project site. The four antenna structures and building have since been removed.

The project area is mostly undeveloped and consists of a square-shaped parcel totaling 9.8 acres. The project site, located in a relatively flat area that slopes gently to the northwest with no existing buildings or structures, is currently vacant. Based on historical aerial photographic research, the site was first developed as an AM radio station in the late 1960s. Prior to its use as a radio station, the site was used for agricultural purposes. Access to the site is available from State Route 91 (SR-91).

The project site is not within an Alquist-Priolo Earthquake Fault Zone for surface fault rupture hazards and no active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site (City of Riverside 2018). The project would not place any proposed buildings or development over a fault line. Potential project impacts with respect to geological hazards are discussed in detail in the Geology and Soils section of this Draft Focused EIR.

The project site and surrounding areas are within the City of Riverside. The Casa Blanca Neighborhood includes a mix of uses surrounding the project site, including the Church of Christ to the east, residential uses to the west and south, and a baseball field and community center to the north of the site. Adjoining properties include single-family residential development to the west and south, a grass field, the SSgt. Salvador J. Lara Casa Blanca Public Library to the west, Lincoln Avenue Church of Christ and various government buildings to the east, and Villegas Park to the north and

northeast of the site. SR-91 is located 0.7 mile northwest of the site, and Interstate 60 (I-60) is located 4.6 miles southwest of the site. Most of the surrounding area is used for residential purposes, as the community plan recommends preserving and protecting the neighborhood's single-family character.

Project Description

The Riverside Unified School District (RUSD) is proposing to construct a new K-6 campus known as Casa Blanca Elementary School (project) on a 9.8-acre site at 7351 Lincoln Avenue in the City of Riverside (Assessor's Parcel Number: 230-360-001). The City of Riverside General Plan 2025 designates the project site as High Density Residential (HDR) with the current zoning designated as R-3-1500—for Multi-Family Residential zone. The California legislature grants school districts the power to exempt school property from county and city zoning requirements, provided the school district complies with the terms of Government Code Section 53094. As lead agency for the project, it is anticipated that RUSD will comply with Government Code Section 53094 to render the local county and city zoning ordinances inapplicable to the project to the extent such ordinances would not otherwise permit the proposed school use. Within 10 days of the action, the Board will provide notice of this action to the County and the City. Following this process, the project would not conflict with plans or policies. Alternatively, the City could process a General Plan Amendment (GPA) and Rezone to Public Facilities use.

The project consists of a 1-story 11,000-square-foot multi-purpose/food service building, a 1-story 6,500-square-foot administration building, a 2-story 83,000-square-foot classroom, and a library and kindergarten building with a capacity to serve up to 800 students (Exhibit 2-3). In addition to the main buildings, the site proposes to include outdoor recreation space consisting of a 13,500-square-foot kindergarten playground, 29,500-square-foot quad and courtyard with lunch shelter, 36,800-square-foot hardcourt area, 143,500-square-foot playfields (baseball, basketball, and soccer fields), a 4,000-square-foot outdoor Science Grow Lab, and associated soft edge landscaping totaling 240,870 square feet.

A total of four driveways would provide ingress/egress to the project. All driveways fronting Lincoln Avenue are restricted to right-in and right-out turning only. There are three proposed on-site parking lots: (1) a 47,200-square-foot staff parking lot with 84 stalls and a bus drop-off area for up to three buses to cue; (2) a 16,000-square-foot kindergarten parking lot with 24 spaces and a drop-off area for up to eleven cars to cue; and (3) a 17,000-square-foot visitor parking lot with 24 spaces and a parent drop-off area for up to 16 cars to cue. Combined, the three proposed lots will be 80,200 square feet and have 132 parking spaces.

The new campus would serve students living in the Casa Blanca Neighborhood school boundary (Exhibit 2-4). School instruction would begin in early August until the end of May, operating 181 days out of the year for students with a few additional workdays for teachers. The facilities would be unoccupied for some holidays and for longer periods during the months of November, December, January, and March. Daily hours of operation for instruction would align with surrounding elementary schools: Monday, Tuesday, Thursday, and Friday from 8:05 a.m. to 2:30 p.m., and Wednesday from 8:05 a.m. to 1:15 p.m. An afterschool program has not been established at this

time. However, in the event a program is established, students will be on campus from the end of school until 6:00 p.m. each day.

Construction

Prior to construction of the project, building foundations would need to be established through grading and paving. The proposed buildings and associated infrastructure would stay consistent with development standards and the surrounding architecture. The anticipated start of construction is June 2020.

Operation

During the operational phase of the project, Casa Blanca Elementary School would provide academic services and accommodations to a maximum of 800 K-6 students within the Casa Blanca neighborhood that extends from Mary Street to Jefferson Street between Indiana Avenue and Victoria Avenue. Development of the school would establish new facilities in a community where demand for additional academic services and facilities is high, especially at the elementary level.

Project Objectives

The objectives of the project are to:

- **OBJ-1:** Provide an educational institution to serve the Casa Blanca neighborhood and surrounding areas.
- **OBJ-2:** Relieve over-capacity at neighboring schools.
- **OBJ-3:** Establish new facilities in a community where the demand for additional academic services and facilities is high, especially at the elementary school level.
- **OBJ-4:** Establish an educational facility that serves to connect and enhance an existing neighborhood.

Discretionary approvals and permits are required prior to implementation of the project. The project application would require the following discretionary approvals and actions, including:

- Site Plan and Design Review from RUSD, California Division of State Architect, and/or drainage and road improvement and related grading purposes from the City of Riverside.
- Land Acquisition Agreement.
- Vote of the RUSD Board per Government Code Section 53094 allowing an exemption to zoning requirements for school building projects; alternatively General Plan and Zoning Code Map Amendment from the City of Riverside and Planning Commission.

Significant Unavoidable Adverse Impacts

The project would result in the following significant unavoidable impacts:

- **Transportation and Traffic:** The project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian bicycle paths, and mass transit.

Summary of Project Alternatives

Below is a summary of the alternatives to the project considered in Section 5, Alternatives to the Proposed Project.

No Project Alternative

- Under the no project alternative, the site would remain in its existing condition and no development would occur.

Reduced Size Alternative

- Under the Reduced Size Alternative, the project would be reduced by 25 percent.

Multi-Family Residential Alternative

- Under the Multi-Family Residential Alternative, the site would be used for a 210-unit condominium community as opposed to its current plan of an elementary school.

Alternate Location Alternative

- Under the Alternate Location Alternative, the project would be developed on one of four vacant lots along Victoria Avenue. Potential alternative sites include Lot B on the corner of Washington Street and Victoria Avenue, Lot C on the corner of Victoria Avenue and Grace Street, Lot D on the corner of Victoria Avenue and Madison Street, and Lot E on the corner of Victoria Avenue and the opposite side of Madison Street. For purposes of this alternative analysis, only Lot B was selected and analyzed.

Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the lead agency, including issues raised by agencies and the public, and it must also address issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

A Notice of Preparation (NOP) for the project was issued on October 24, 2018. The NOP describing the original concept for the project and issues to be addressed in the Focused EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review

period extending from October 24, 2018 through November 23, 2018. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- Greenhouse Gas (GHG) Emissions
- Land Use and Planning
- Noise
- Public Services
- Transportation and Traffic

The NOP and comments received in response to the NOP are included in Appendix A.

Disagreement Among Experts

This Draft Focused EIR contains substantial evidence to support all the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions, although the RUSD is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide the standards for treating disagreement among experts. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the public and decision makers to make an informed judgment about the environmental consequences of the project.

Potentially Controversial Issues

Below is a list of potentially controversial issues that may be raised during the public review and hearing process of this Draft Focused EIR:

- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- GHG Emissions
- Land Use and Planning
- Noise
- Public Services
- Transportation and Traffic

It is also possible that evidence will be presented during the statutory Draft Focused EIR public review period identified in the Notice of Completion (NOC)[1] that may create disagreement. Decision makers would consider this evidence during the public hearing process.

In rendering a decision on a project where there is disagreement among experts, the decision makers are not obligated to select the most environmentally preferable viewpoint. Decision makers are vested with the ability to choose whatever viewpoint is preferable and need not resolve a dispute among experts. In their proceedings, decision makers must consider comments received

[1] The Notice of Completion identifies the public review period for this Draft Focused EIR. The minimum public review period for an EIR is 30 days. When a DEIR is sent to the State Clearinghouse for review, as in this case, the public review period must be 45 days unless the Clearinghouse approves a shorter period. Because the proposed project is not of statewide, areawide or regional environmental significance, RUSD requested a shortened review period in writing, and the responsible and trustee agencies were contacted and agreed to the shortened review period. The shortened review period was requested due to the severe time constraints that RUSD is operating under acquire the project site.

concerning the adequacy of the Draft Focused EIR and address any objections raised in these comments. However, decision makers are not obligated to follow any directives, recommendations, or suggestions presented in comments on the Draft Focused EIR, and can certify the Final Focused EIR without needing to resolve disagreements among experts.

Public Review of the Draft Focused EIR

Upon completion of the Draft Focused EIR, the RUSD filed a NOC with the State Office of Planning and Research to begin the public review period (Public Resources Code Section 21161). RUSD requested a shortened public review period of 30 days for the project pursuant to Public Resources Code section 21091.Please see the NOC for the dates of the public review period for this Draft Focused EIR. Concurrent with the NOC, this Draft Focused EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft Focused EIR in accordance with Public Resources Code Section 21092(b)(3). During the public review period, the Draft Focused EIR, including the technical appendices, is available for review at the RUSD Operations Division – Planning and Development online addresses:

http://www.riversideunified.org/departments/operations_division/facilities_planning_development

In addition, the Draft Focused EIR is available at the following locations:

Riverside Unified School District
3070 Washington Street
Riverside, CA 92504

Riverside Unified School District
3380 14th Street
Riverside, CA 92501

Agencies, organizations, and interested parties have the opportunity to comment on the Draft Focused EIR during the public review period identified in the NOC. Written comments on this Draft Focused EIR should be addressed to:

Ana Gonzalez, Director
Facilities Planning and Development Department
Riverside Unified School District
3070 Washington Street
Riverside, CA 92504
Phone: 951.788.7496
Email:AnaGonzalez@rusd.k12.ca.us

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the RUSD on the project, at which the certification of the Final Focused EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

Summary of Impacts and Mitigation Measures

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this Draft Focused EIR. Table ES-1 is included in the Draft Focused EIR as required by CEQA Guidelines Section 15123(b)(1).

Table ES-1: Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.1—Air Quality		
Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.	No mitigation measures are required.	Less than significant impact.
Impact AIR-2: The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.	No mitigation measures are required.	Less than significant impact.
Impact AIR-3: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	No mitigation measures are required.	Less than significant impact.
Impact AIR-4: The project would expose sensitive receptors to substantial pollutant concentrations.	**MM AIR-4:** During construction activities, all off-road equipment with engines greater than 50 horsepower shall meet either EPA or ARB Tier IV Interim off-road emission standards. The construction contractor shall maintain records concerning its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information may include but are not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number. If engines that comply with Tier IV Interim off-road emission standards are not commercially available, then the construction contractor shall use the next cleanest piece of off-road equipment (e.g., Tier III) available. For purposes of this mitigation measure, “commercially available” shall mean the availability of Tier IV Interim engines taking into consideration factors such as critical-path timing of construction and geographic proximity to the project site of equipment. The contractor can maintain records for equipment that is not commercial available by providing letters from at least two rental companies for each piece of off-road equipment where the Tier IV Interim engine is not available.	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact AIR-5: The project would not create objectionable odors affecting a substantial number of people.	No mitigation measures are required.	Less than significant impact.
Section 3.2—Biological Resources		
Impact BIO-1: The project would potentially have a substantial adverse impact on special-status plant and wildlife species.	**MM-BIO-1: Migratory and Nesting Birds** • Implementation of the following avoidance and minimization measures would avoid or minimize potential effects to migratory birds and habitat in and adjacent to the project site. These measures shall be implemented for construction work during the nesting season (February 15 through August 31): - If construction or tree removal is proposed during the breeding/nesting season for migratory birds (typically February 15 through August 31), a qualified biologist shall conduct pre-construction surveys for northern harrier, and other migratory birds within the construction area, including a 300-foot survey buffer, no more than 3 days prior to the start of ground disturbing activities in the construction area. - If an active nest is located during pre-construction surveys, USFWS and/or CDFW (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 300 feet around an active raptor nest and 50-foot radius around an active migratory bird nest) or alteration of the construction schedule. - A qualified biologist shall delineate the buffer using nest buffer signs, Environmentally Sensitive Area (ESA) fencing, pin flags, and or flagging tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently. **MM-BIO-2: Migratory and Nesting Bats** • If suitable roosting habitat for special-status bats will be affected by	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
	project construction (e.g., removal or buildings, modification of bridges), a qualified wildlife biologist will conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (Anabat, etc.). Visual surveys will include trees within 0.25 mile of project construction activities. The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required. • If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. • If roosts are determined to be present and must be removed, the bats will be excluded from the roosting site before the facility is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but cannot not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). • If roosts cannot be avoided or it is determined that construction activities may cause roost abandonment, such activities may not commence until permanent, elevated bat houses have been installed outside of, but near the construction area. Placement and height will be determined by a qualified wildlife biologist, but the height of the bat house will be at least 15 feet. Bat houses will be multi-chambered and will be purchased or constructed in accordance with CDFW standards. The number of bat houses required will be dependent upon the size and number of colonies	

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
	found, but at least one bat house will be installed for each pair of bats (if occurring individually), or of sufficient number to accommodate each colony of bats to be relocated. **MM-BIO-3: Burrowing Owl Mitigation Measures** To minimize impacts and to adhere to the Western Riverside MSHCP mitigation requirements regarding burrowing owl, it is recommended that: • No more than 30 days prior to the first ground-disturbing activities, the project Applicant shall retain a qualified biologist to conduct a preconstruction survey on the project site. The survey shall establish the presence or absence of western burrowing owl and/or habitat features, and evaluate use by owls in accordance with CDFW survey guidelines. • On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership need not be surveyed. The survey shall take place near the sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. During the breeding season (February 1–August 31), surveys shall document whether burrowing owls are nesting on or directly adjacent to disturbance areas. During the non-breeding season (September 1–January 31), surveys shall document whether burrowing owls are using habitat on or directly adjacent to any disturbance area. Survey results will be valid only for the season during which the survey is conducted. • If burrowing owls are not discovered, further mitigation is not required. If burrowing owls are observed during the pre-construction surveys, the applicant shall perform the following measures to limit the impact on the burrowing owls: 1. Avoidance shall include establishment of a 160-foot non-disturbance buffer zone. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation, or that the juveniles from	

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
	the occupied burrows have fledged. During the non-breeding season (September 1-January 31), the project proponent shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a 160-foot non-disturbance buffer zone. 2. If it is not possible to avoid occupied burrows, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent re-occupation. Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow. Additionally, the Western Riverside MSHCP has specific guidelines that will need to be followed if burrowing owls are found on site. They are as follows: • A focused burrow survey that includes natural burrows or suitable man-made structures needs to be conducted as described below. • A systematic survey for burrows including burrowing owl sign should be conducted by walking through suitable habitat over the entire survey area (i.e. the project site and within 150 meters). Pedestrian survey transects need to be spaced to allow 100 percent visual coverage of the ground surface. • The distance between transect center lines should be no more than 30 meters (approximately 100 feet) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more qualified surveyors conduct concurrent surveys. • The location of all suitable burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed should be recorded and mapped, including GPS coordinates. If the survey area contains natural or man-made structures that could potentially support burrowing owls, or	

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
	owls are observed during the burrow surveys, the systematic surveys should continue as prescribed in Part B. If no potential burrows are detected, no further surveys are required. A written report including photographs of the project site, location of burrowing owl habitat surveyed, location of transects, and burrow survey methods should be prepared. If the report indicates further surveys are not required, then the report should state the reason(s) why further focused burrowing owl surveys are not necessary. • Focused Burrowing Owl Surveys will consist of site visits on four separate days. The first one may be conducted concurrent with the Focused Burrow Survey. 1. Upon arrival at the survey area and prior to initiating the walking surveys, surveyors using binoculars and/or spotting scopes should scan all suitable habitat, location of mapped burrows, owl sign, and owls, including perch locations to ascertain owl presence. This is particularly important if access has not been granted for adjacent areas with suitable habitat. 2. A survey for owls and owl sign should then be conducted by walking through suitable habitat over the entire project site and within the adjacent 150 m (approximately 500 feet). These “pedestrian surveys” should follow transects (i.e. Survey transects that are spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (approximately 100 feet.) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more qualified surveyors conduct concurrent surveys.) It is important to minimize disturbance near occupied burrows during all seasons. 3. If access is not obtained, then the area adjacent to the project site shall also be surveyed using binoculars and/or spotting scopes to determine if owls are present in areas adjacent to project site. This 150-meter	

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
	buffer zone is included to fully characterize the population. If the site is determined not to be occupied, no further surveys are required until 30 days prior to grading (see Pre-construction Surveys below). After completion of appropriate surveys, a final report shall be submitted to the Riverside County Environmental Programs Department and the RCA Monitoring Program Administrator, which discusses the survey methodology, transect width, duration, conditions, and results of the survey. Appropriate maps showing burrow locations shall be included. All project sites containing burrows or suitable habitat (based on Step I/Habitat Assessment) whether owls were found or not, require pre-construction surveys that shall be conducted within 30 days prior to ground disturbance to avoid direct take of burrowing owls (MSHCP Species-Specific Objective 6).	
Impact BIO-2: The project would not have adverse impacts on sensitive natural communities or riparian habitat.	No mitigation measures are required.	Less than significant impact.
Impact BIO-3: The project would not have a substantial adverse effect on wetlands or jurisdictional features.	No mitigation measures are required.	Less than significant impact.
Impact BIO-4: The project would not have substantial adverse impacts on fish or wildlife movement.	No mitigation measures are required.	Less than significant impact.
Impact BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Implement MM BIO-1 through BIO-3.	Less than significant impact.
Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Implement MM BIO-1 through BIO-3.	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.3—Cultural and Tribal Cultural Resources		
Impact CUL-1: Subsurface construction activities associated with the project would potentially damage or destroy previously undiscovered historic resources.	**MM CUL-1:** If cultural resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology and Historic Preservation (National Park Service 1983) shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work such as data recovery excavation may be warranted by the archaeologist to exhaust the data potential of the resource.	Less than significant impact.
Impact CUL-2: Subsurface construction activities associated with the project would potentially damage or destroy previously undiscovered archaeological resources.	Implement MM CUL-1a.	Less than significant impact.
Impact CUL-3: Subsurface construction activities associated with the project would potentially damage or destroy previously undiscovered paleontological resources.	**MM CUL-3a:** Prior to the issuance of grading permits, a paleontological investigation shall be conducted and a paleontological investigation report shall be submitted to and approved by the County Geologist. The investigation and report shall include, at a minimum, appropriate literature research, personnel interviews as appropriate, site geologic mapping, discussion and description of specific geologic formations/units encountered at the site, and a description of any/all paleontological resources found and/or anticipated to be present at the site. The report shall state the extent and potential significance of the paleontological resources that may exist within the proposed development and provide appropriate measures through which the impacts of the proposed development may be mitigated. In addition, the paleontological consultant shall plot all appropriate geologic and paleontological data on the parent case exhibit and include it as an appendix/figure/plate in their report. **MM CUL-3b:** Prior to the issuance of Grading Permits, the applicant shall retain a qualified paleontologist approved by the County of Riverside to	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
	create and implement a project-specific plan for monitoring site grading/earthmoving activities (project paleontologist). The project paleontologist retained shall review the approved development plan and grading plan and shall conduct any pre-construction work necessary to render appropriate monitoring and mitigation requirements as appropriate. These requirements shall be documented by the project paleontologist in a Paleontological Resource Impact Mitigation Program (PRIMP). This PRIMP shall be submitted to the County Geologist for review and approval prior to issuance of a Grading Permit.	
Impact CUL-4: Subsurface construction activities associated with the project may damage or destroy previously undiscovered human burial sites.	**MM CUL-4:** If human remains are found, State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In accordance with this code, in the event of an unanticipated discovery of human remains, the Riverside County Coroner would be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendant (MLD). The MLD would complete the inspection of the site within 48 hours of notification and may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.	Less than significant impact.
Impact CUL-5: Subsurface construction activities associated with the project may damage or destroy previously undiscovered tribal cultural resources.	**MM CUL-5:** If tribal cultural resources are encountered during ground-disturbing activities, work in the immediate area would be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology and Historic Preservation (National Park Service 1983) would be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the archaeologist determines that the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work such as data recovery excavation may be warranted to exhaust the data potential of the resource. Evaluation process shall be approved by the agency and the Native American representative(s) as identified in during the AB 52 consultation process.	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.4—Greenhouse Gas Emissions		
Impact GHG-1: The project would not generate direct and indirect greenhouse gas emissions that would result in a significant impact on the environment.	No mitigation measures are required.	Less than significant impact.
Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.	No mitigation measures are required.	Less than significant impact.
Section 3.5—Hydrology and Water Quality		
Impact HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	No mitigation measures are required.	Less than significant impact.
Impact HYD-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	No mitigation measures are required.	Less than significant impact.
Impact HYD-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; (iii) create or contribute runoff water which would exceed the capacity of existing or planned	No mitigation measures are required.	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
stormwater drainage systems or provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows?		
Impact HYD-4: The project would not be located in a flood hazard zone, tsunami, or seiche zone, or risk release of pollutants due to project inundation.	No mitigation measures are required.	No impact.
Impact HYD-5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	No mitigation measures are required.	Less than significant impact.
Section 3.6—Land Use and Planning		
Impact LUP-1: The project would not disrupt or physically divide an established community.	No mitigation measures are required.	Less than significant impact.
Impact LUP-2: The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	No mitigation measures are required.	Less than significant impact.
Impact LUP-3: The project would conflict with any applicable habitat conservation plan or natural communities conservation plan.	Implementation of MM-BIO-1: Migratory and Nesting Birds. Implementation of MM BIO-2: Migratory and Nesting Bats. Implementation of MM-BIO-3: Burrowing Owl.	Less than significant impact with mitigation measures incorporated.
Section 3.7—Noise		
Impact NOI-1: The project would not potentially expose persons to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies.	No mitigation measures are required.	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact NOI-2: The project would not expose persons to generation of excessive groundborne vibration or groundborne noise levels.	No mitigation measures are required.	Less than significant impact.
Impact NOI-3: The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	No mitigation measures are required.	Less than significant impact.
Impact NOI-4: The project would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	**MM NOI-4:** Implementation of the following multi-part mitigation measure is required to reduce potential construction period noise impacts: • The construction contractor shall ensure that all equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment. • The construction contractor shall ensure that unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes) is prohibited. • The construction contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists. • At all times during project grading and construction, the construction contractor shall ensure that stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from adjacent residences. • The construction contractor shall ensure that the construction staging areas shall be located to create the greatest feasible distance between the staging area and noise-sensitive receptors nearest the project site. • The construction contractor shall ensure that all on-site construction activities, including the operation of any tools or equipment used in construction, drilling, repair, alteration, grading or demolition work, do not commence between the hours of 7:00 p.m. and 7:00 a.m. on week days and between 5:00 p.m. and 8:00 a.m. on Saturdays or at any time on a Sunday or federal holidays.	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact NOI-5: The project would not expose people residing or working at the project site to excessive noise levels due to its location within an airport land use plan.	No mitigation measures are required.	No impact.
Impact NOI-6: The project would not expose people residing or working at the project site to excessive noise levels because of its location within the vicinity of a private airstrip.	No mitigation measures are required.	No impact.
Section 3.8—Public Services		
Impact PS-1: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.	No mitigation measures are required.	Less than significant impact.
Impact PS-2: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.	No mitigation measures are required.	Less than significant impact.
Impact PS-3: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools.	No mitigation measures are required.	No impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact PS-4: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks.	No mitigation measures are required.	Less than significant impact.
Impact PS-5: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities.	No mitigation measures are required.	Less than significant impact.
Section 3.9—Transportation and Traffic		
Impact TRANS-1: The project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.	**MM TRANS-1a:** The project will pay a proportional "fair-share" of the improvement costs of the impacted intersections to mitigate the project's traffic impacts. **MM TRANS-1b:** RUSD shall pay a proportional "fair-share" contribution for the installation of a two-phase traffic signal at the Washington Street and Lincoln Avenue intersection. The installation of this improvement is subject to the approval of the City of Riverside. **MM TRANS-1c:** Appropriate school signs and pavement markings shall be installed by RUSD near the project area. Crosswalks at the intersections of Madison Street and Lincoln Avenue and Washington Street and Lincoln Avenue shall be painted yellow to indicate school crossings. SR4-1 signs and SW24-3 signs should be installed in the general vicinity of the yellow asterisks shown in Exhibit 3.9 22 of the TIA. Flashing pedestrian school	Significant and unavoidable impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
	crossing signals shall be installed on the west leg of the intersection of Lincoln Avenue/Collingwood street-Project Driveway No. 3. Flashing pedestrian school signal shall be staffed by a crossing guard during the school arrival period and departure period to further ensure that pedestrians can safely cross Lincoln Avenue. **MM TRANS-1d:** Pedestrians travelling northwest/west/southwest of the site should travel towards and along Madison Street to its intersection with Lincoln Avenue. Students then should cross the street within the crosswalks at the intersection of Madison Street/Lincoln Avenue during the traffic signals walk-phase. Consequently, pedestrians travelling northeast/east/southeast of the school should travel towards and along Washington Street to its intersection with Lincoln Avenue. Students should then cross the street within the crosswalks at the intersection of Washington Street/Lincoln Avenue. **MM TRANS-1e:** Sidewalk improvements are to be provided along the easterly boundary of the school parking lot to provide safe student access to the school from the east via t the north side of Lincoln Avenue. **MM TRANS-1f:** Project Drive No. 3 shall be directly aligned (i.e. centerline to centerline) with Collingswood Street to minimize conflicting vehicular movements during final detail design review.	
Impact TRANS-2: The project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	No mitigation measures are required.	Less than significant impact.

Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact TRANS-5: The project would not result in inadequate emergency access.	**MM TRANS-5:** Prior to issuance of any grading permits, the developer shall provide a detailed construction traffic control plan to the City of Riverside for approval. A construction traffic control plan shall be prepared for all aspects of project construction, including physical improvements on the site itself, as well as any off-site traffic improvements required to be completed directly by the project applicant. The construction traffic control plan shall describe in detail the location of equipment staging areas, stockpiling/storage areas, construction worker and equipment parking areas, roadways that would be potentially affected, safe detours around the project and/or roadway construction site, as well as provide temporary traffic control (e.g., flag person) and appropriate signage during construction-related truck hauling activities. The traffic control plan shall ensure adequate and uninterrupted access to all nearby residences throughout the construction period. The purpose of these measures is to safely guide motorists, cyclists, and pedestrians, minimize traffic impacts, and ensure the safe and even flow of traffic during construction, consistent with County standards and requirements.	Less than significant impact.
Impact TRANS-6: The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	No mitigation measures are required.	Less than significant impact.

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SECTION 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Focused Environmental Impact Report (Draft Focused EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Casa Blanca Elementary School Project (State Clearinghouse No. 2018101073). This document is prepared in conformance with CEQA (California Public Resources Code [PRC] § 21000, et seq.) and the CEQA Guidelines (California Code of Regulations [CCR] Title 14 § 15000, et seq.). This Draft Focused EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the proposed project.

1.1.1 - Overview

The proposed project consists of a 1-story 11,000-square-foot multi-purpose/food service building, a 1-story 6,500-square-foot administration building, a 2-story 83,000-square-foot classroom, and a library and kindergarten building with a capacity to serve up to 800 students. In addition to the main buildings, the site proposes to include outdoor recreation space that consists of a 13,500-square-foot kindergarten playground, 29,500-square-foot quad and courtyard, 36,800-square-foot hardcourts, 143,500-square-foot playfields (baseball, basketball, and soccer fields), a 4,000-square-foot outdoor Science Grow Lab, and associated landscaping totaling 240,870 square feet. Section 2, Project Description, provides a complete description of the project.

Regional access to the site is provided via State Route 91 (SR-91) (also known as the Riverside Freeway) via the Madison Street exit, which is located approximately 0.7 mile northwest of the project site and approximately 4.6 miles southwest of State Route 60 (SR-60), in the central portion of the City of Riverside.

A total of four driveways would provide ingress/egress to the project. All driveways front Lincoln Avenue and are restricted to right-in and right-out turning. There are three proposed parking lots: (1) a 47,200-square-foot staff parking lot including a total of 84 stalls and a bus drop-off area for up to three buses to cue; (2) a 16,000-square-foot kindergarten parking lot including a total of 24 spaces and a drop-off area; and (3) a 17,000-square-foot visitor parking lot including a total of 24 spaces and a parent drop-off area. In total, the three proposed parking lots will be a combined 80,200 square feet and have a total of 132 spaces.

1.1.2 - Purpose and Authority

This Draft Focused EIR provides a project-level analysis of the environmental effects of the Casa Blanca Elementary School Project. The environmental impacts of the proposed project are analyzed in the Focused EIR to the degree of specificity appropriate, in accordance with CEQA Guidelines Section 15146. This document addresses the potentially significant adverse environmental impacts that may be associated with the planning, construction, or operation of the project. It also identifies

appropriate and feasible mitigation measures and alternatives that may be adopted to significantly reduce or avoid these impacts.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft Focused EIR and include:

- Table of Contents
- Introduction
- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found not to be Significant
- Areas of Known Controversy

1.1.3 - Lead Agency Determination

The Riverside Unified School District (RUSD) is designated as the lead agency for the project. CEQA Guidelines Section 15367 defines the lead agency as ". . . the public agency, which has the principal responsibility for carrying out or approving a project." Other public agencies may use this Draft Focused EIR in the decision-making or permit process and consider the information in this Draft Focused EIR along with other information that may be presented during the CEQA process.

This Draft Focused EIR was prepared by FirstCarbon Solutions, an environmental consultancy. Prior to public review, it was extensively reviewed and evaluated by the RUSD. This Draft Focused EIR reflects the independent judgment and analysis of the RUSD as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel is provided in Section 8, Persons and Organizations Consulted—List of Preparers, of this Draft Focused EIR.

1.2 - Scope of the Focused EIR

This Draft Focused EIR addresses the potential environmental effects of the proposed project. RUSD issued a Notice of Preparation (NOP) for the proposed project on October 24, 2018, which circulated between October 24, 2018, and November 23, 2018, for the statutory 30-day public review period. The scope of this Draft Focused EIR includes the potential environmental impacts identified in the Initial Study, NOP, and issues raised by agencies and the public in response to the NOP. The Initial Study and NOP are contained in Appendix A of this Draft Focused EIR.

Seven comment letters were received in response to the NOP. They are listed in Table 1-1 and provided in Appendix A of this Draft Focused EIR.

Table 1-1: IS-NOP Comment Letters

Agency/Organization	Author	Date
Public Agencies		
South Coast Air Quality Management District	Daniel Garcia, Program Supervisor	November 8, 2018
Riverside Transit Agency	Joshua Palazzo, Planning and Scheduling Technician	November 6, 2018
City of Riverside Fire Department	Jennifer McDowell, Fire Marshal	November 16, 2018
City of Riverside	Joy Eastman, AICP, Principal Planner	November 30, 2018
Individuals		
Resident	Al Navarro	November 7, 2018
Resident	Bob Garcia	November 7, 2018
Resident	Paul Chavez	November 7, 2018

The primary issues of concern raised in scoping comments include:

- Traffic and Transportation

1.2.1 - Environmental Issues Determined not to be Significant

The Initial Study and NOP identified topical areas that were determined not to be significant. An explanation of why each area is determined not to be significant is provided in Section 7, Effects Found not to be Significant. These topical areas are as follows:

- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas (GHG) Emissions
- Hydrology
- Land Use
- Noise
- Public Services

1.2.2 - Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that will require further analysis in the Focused EIR. These sections are as follows:

- Traffic and Transportation

1.3 - Organization of the EIR

This Draft Focused EIR is organized into the following main sections:

- **Section ES: Executive Summary.** This section includes a summary of the proposed project and alternatives to be addressed in the Draft Focused EIR. A brief description of the areas of controversy and issues to be resolved, and overview of the Mitigation Monitoring and Reporting Program (MMRP), in addition to a table that summarizes the impacts, mitigation measures, and level of significance after mitigation, are also included in this section.
- **Section 1: Introduction.** This section provides an introduction and overview describing the purpose of this Draft Focused EIR, its scope and components, and its review and certification process.
- **Section 2: Project Description.** This section includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft Focused EIR, responsible agencies, and approvals that are needed for the proposed project are also provided.
- **Section 3: Environmental Impact Analysis.** This section analyzes the environmental impacts of the proposed project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Section 3, Environmental Impact Analysis, are as follows:
  - **Section 3.1—Air Quality:** Addresses the potential air quality impacts associated with project implementation, as well as consistency with the South Coast Air Quality Management District 2005 Ozone Strategy. .
  - **Section 3.2—Biological Resources:** Addresses the project's potential impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat; and impacts on listed, proposed, and candidate threatened and endangered species.
  - **Section 3.3—Cultural and Tribal Cultural Resources:** Addresses potential impacts on historical resources, archaeological resources, paleontological resources, and burial sites.
  - **Section 3.4—Greenhouse Gas Emissions:** Addresses the potential of the project to generate GHG emissions.
  - **Section 3.5—Hydrology and Water Quality:** Addresses the potential impacts of the project on local hydrological conditions, including drainage areas and changes in the flow rates.
  - **Section 3.6—Land Use and Planning:** Addresses the potential land use impacts associated with division of an established community and consistency with the City of Riverside General Plan 2025 and other land use plans and policies.
  - **Section 3.7—Noise:** Addresses the potential noise impacts during construction and at project buildout from mobile and stationary sources. The section also addresses the impact of noise generation on neighboring uses.
  - **Section 3.8—Public Services:** Addresses the potential impacts upon public services, including fire protection, law enforcement, schools, parks, and recreational facilities.

- **Section 3.9—Transportation and Traffic:** Addresses the impacts on the local and regional roadway system, public transportation, bicycle, and pedestrian access.

- **Section 4: Cumulative Effects.** This section discusses the cumulative impacts associated with the proposed project, including the impacts of past, present, and probable future projects.
- **Section 5: Alternatives to the Proposed Project.** This section compares the impacts of the proposed project with three land-use project alternatives: the No Project Alternative, the Multi-Family Residential Alternative, the Reduced Size Alternative, and the Alternate Location Alternative. An environmentally superior alternative is identified. In addition, alternatives initially considered but rejected from further consideration are discussed.
- **Section 6: Other CEQA Considerations.** This section provides a summary of significant environmental impacts, including unavoidable and growth-inducing impacts. This section discusses the cumulative impacts associated with the proposed project, including the impacts of past, present, and probable future projects. In addition, the proposed project's energy demand is discussed.
- **Section 7: Effects Found not to be Significant.** This section contains analysis of the topical sections not addressed in Section 3.
- **Section 8: Persons and Organizations Consulted/List of Preparers.** This section contains a full list of persons and organizations that were consulted during the preparation of this Draft Focused EIR. This section also contains a full list of the authors who assisted in the preparation of the Draft Focused EIR, by name and affiliation.
- **Section 9: References.** This section contains a full list of references that were used in the preparation of this Draft Focused EIR.
- **Appendices.** This section includes all notices and other procedural documents pertinent to the Draft Focused EIR, as well as all technical material prepared to support the analysis.

1.4 - Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft Focused EIR has referenced several technical studies, analyses, and previously certified environmental documents. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the Draft Focused EIR has also been described. The documents and other sources that have been used in the preparation of this Draft Focused EIR include but are not limited to:

- City of Riverside General Plan 2025 (adopted November 2007)

These documents are specifically identified in Section 9, References, of this Draft Focused EIR. In accordance with CEQA Guidelines Section 15150(b), the General Plan, and the referenced documents and other sources used in the preparation of the Draft Focused EIR are available for review at the Facilities Planning and Development Department at the address shown in Section 1.6 below.

1.5 - Documents Prepared for the Project

The following technical studies and analyses were prepared for the proposed project:

- Preliminary Hydrology Report. 2019. KPFF Engineering (KPFF).
- Traffic Impact Analysis. 2018. Linscott, Law and Greenspan, Engineers (LLG).
- FirstCarbon Solutions (FCS). 2018. Air Quality and Greenhouse Gas Analysis Report. December.
- FirstCarbon Solutions (FCS). 2018. Biological Resources Assessment. August.
- FirstCarbon Solutions (FCS). 2018. Construction Health Risk Assessment Memo. December.
- FirstCarbon Solutions (FCS). 2018. Noise Impact Analysis Report. December.
- FirstCarbon Solutions (FCS). 2018. Phase I Cultural Resources Assessment. August.

1.6 - Lead Agency, Developer, and Consultant

RUSD is the lead agency in the preparation of the Draft EIR. The applicant/owner is the RUSD. RUSD is the developer of the project. FirstCarbon Solutions is the environmental consultant for the project.

1.7 - Review of the Draft Focused EIR

Upon completion of the Draft Focused EIR, RUSD filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code [PRC] § 21161). Concurrent with the NOC, this Draft Focused EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft Focused EIR in accordance with Public Resources Code Section 21092(b)(3). During the public review period, the Draft Focused EIR, including the technical appendices, is available for review at the RUSD Operations Division—Planning and Development online addresses:

http://www.riversideunified.org/departments/operations_division/facilities_planning_development

In addition, the Draft Focused EIR is available at the following locations:

Riverside Unified School District
3070 Washington Street
Riverside, CA 92504

Riverside Unified School District
3380 14th Street
Riverside, CA 92501

Agencies, organizations, and interested parties have the opportunity to comment on the Draft Focused EIR during the 45-day public review period.[1]

[1] As explained in the Executive Summary, RUSD requested a shortened 30-day public review period pursuant to Public Resources Code Section 21091.

Written comments on this Draft Focused EIR should be addressed to:

Ana Gonzalez, Director
Facilities Planning and Development Department
Riverside Unified School District
3070 Washington Street
Riverside, CA 92504
Phone: 951.788.7496
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Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the Board of Education, at which the certification of the Final Focused EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

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SECTION 2: PROJECT DESCRIPTION

This Draft Focused Environmental Impact Report (Draft Focused EIR) analyzes the potential environmental effects of the Casa Blanca Elementary School Project in the City of Riverside.

2.1 - Project Location

2.1.1 - Location

The project site is located in the City of Riverside, in Riverside County, California (Exhibit 2-1). The site is specifically located within the Casa Blanca Neighborhood on the northern side of Lincoln Avenue and Sonora Place (Exhibit 2-2) at 7351 Lincoln Avenue (Assessor's Parcel Number [APN]: 230-360-001). The 9.8-acre project site was formerly occupied by a KPRO 1570 AM transmitter building and antenna system. The four antenna structures and building have since been removed from the site.

The project site has regional access via State Route 91 (SR-91) (also known as the Riverside Freeway) through the Madison Street exit, which is located approximately 0.7 mile northwest of the project site. The site is also accessible from State Route 60, which is approximately 4.6 miles northeast of the project site, and Interstate 215 located approximately 6.3 miles east of the project site.

2.2 - Existing Conditions

2.2.1 - Project Site

Most of the project site is undeveloped and consists of a square-shaped parcel totaling 9.8 acres. The project site is currently a vacant lot and located in a heavily disturbed, relatively flat area that gently slopes northwest with no existing buildings or structures. It was previously occupied by the KPRO 1570 AM transmitter building and antenna system, which have since been demolished at the southern part of the site. According to historical aerial photographic research, the site was used as an AM radio station in the late 1960s. The site was used for agricultural purposes prior to its use as a radio station.

The project site is not located within an Alquist-Priolo Earthquake Fault Zone for surface fault rupture hazards and no active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site (City of Riverside 2018). Therefore, the project would not place any proposed buildings or development over a fault line.

2.2.2 - Surrounding Land Use

The project site and surrounding areas are within the City of Riverside. The proposed K-6 Elementary School would accommodate students living within the easterly boundary of Mary Street, Victoria Avenue to the southeast, Jefferson Street to the southwest, and Indiana Street at the northwest boundary. The Casa Blanca Neighborhood encompasses approximately 1.5 square miles with a mix of uses surrounding the project site including the Church of Christ to the east, residential uses to the west and south, and a baseball field and community center to the north. Adjoining properties include single-family residential development to the west and south, a grass field and the SSgt. Salvador J. Lara Casa

Blanca Public Library to the west, Lincoln Avenue Church of Christ and various government buildings to the east, and Villegas Park to the north and northeast of the site. SR-91 is located 0.7 mile northwest of the site, and State Route 60 is located 4.6 miles southwest. Most of the surrounding area is used for residential purposes, as the Casa Blanca Neighborhood and Redevelopment Plan recommends preserving and protecting the neighborhood's single-family character.

2.2.3 - Land Use Designation and Zoning Classification

Project Site

The General Plan Land Use designations for the project site consist of High Density Residential (HDR) with the current zoning designated at R-3-1500 for Multi-Family Residential. This HDR designation allows for a maximum of 29 dwelling units per acre (DU/acre) or 18.6 persons/acre; the primary intent of the HDR designation is for multi-family residential use.

The Riverside Unified School District (RUSD) Board of Education has the discretion and legal authority to find the City of Riverside's zoning inapplicable and develop an elementary school on the project site.[1] Alternatively, the City of Riverside could process a General Plan Amendment and Zoning Code Amendment and rezone the project site to a Public Facilities use, which would ensure consistency with the City of Riverside General Plan 2025.

Surrounding Areas

The Casa Blanca Neighborhood includes a mix of uses surrounding the project site, including a church, library, community center, and various government buildings. The City of Riverside General Plan 2025 zones the surrounding areas as the following:

- Agricultural/rural and medium density residential directly to the south.
- Medium density and commercial to the north, in addition to a public park.
- Medium density residential and public facilities/institutional to the east.
- Business/office park and medium density residential to the west.

Potential project impacts with respect to land use are discussed in detail in Section 3.5, Land Use, of this Draft Focused EIR.

2.3 - Project Characteristics

2.3.1 - Proposed Project

The RUSD is proposing the construction of a new K-6 campus known as the Casa Blanca Elementary School (project) on a 9.8-acre site at 7351 Lincoln Avenue in the City of Riverside (APN: 230-360-001). The project consists of a 1-story 11,000-square-foot multi-purpose/food service building, a 1-story 6,500-square-foot administration building, a 2-story 83,000-square-foot classroom, and a library and kindergarten building with a capacity to serve up to 800 students (Exhibit 2-3). In addition

[1] Government Code Section 53094(b) provides that the governing board of a "school district" by a two-thirds vote "may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district."

to the main buildings, the site proposes to include outdoor recreation space that consists of a 13,500-square-foot kindergarten playground, 29,500-square-foot quad and courtyard with lunch shelter, 36,800-square-foot hardcourt area, 143,500-square-foot playfields (baseball, basketball, and soccer fields), a 4,000-square-foot outdoor Science Grow Lab, and associated soft edge landscaping totaling 240,870 square feet.

A total of four driveways would provide ingress/egress to the project. All driveways front Lincoln Avenue and are restricted to right-in and right-out turning. There are three proposed parking lots: (1) a staff parking lot including a total of 84 stalls and a bus drop-off area for up to three buses to cue; (2) a dedicated kindergarten parking lot including a total of 24 spaces and a drop-off area; and (3) a visitor parking lot including a total of 48 spaces and a drop-off area. In total, the three proposed parking lots would provide a total of 156 spaces. Eligibility for bus services is limited to students living 1.25 miles or greater from campus; the number of eligible students will fluctuate each year. On average, it is anticipated that approximately 10-15%[2] of students would be eligible for bus services.

The new campus would serve students living in the Casa Blanca Neighborhood school boundary (Exhibit 2-4). The school calendar and specific operation dates are established by the RUSD every two years. School instruction would begin in early August and continue until the end of May, operating a total of 181 days out of the year for students with additional work days for teachers, as specified by RUSD. The facilities would be unoccupied for some holidays and for longer periods in November, December, January, and March. Daily hours of operation for instruction would be consistent with surrounding elementary schools: Monday, Tuesday, Thursday, and Friday from 8:05 a.m. to 2:30 p.m., and Wednesday from 8:05 a.m. to 1:15 p.m. An afterschool program has not been established at this time. However, in the event an afterschool program is established, students will be on campus from close of school until 6:00 p.m. each school day.

2.3.2 - Construction

Prior to construction of the project and associated infrastructure, the vacant lot would need to be graded and paved to establish building foundations. The various proposed new buildings and associated infrastructure would stay consistent with development standards and the surrounding architecture. The anticipated construction start date is June 2020.

2.3.3 - Operation

During the operational phase of the project, Casa Blanca Elementary School would provide academic services and accommodations to a maximum of 800 K-6 students within the immediate Casa Blanca Neighborhood that extends from Mary Street to Jefferson Street between Indiana Avenue and Victoria Avenue. The school would employ approximately 30-40 people, with a mix of new hires and transfers from within the District. Development of the new school would establish new facilities in a community where the demand for additional academic services and facilities is high, particularly at the elementary school level.

[2] Based on existing usage, it is anticipated that 309 students would be eligible for bus services.

2.3.4 - Master Utilities System

Water and Sewer

Riverside Public Utilities (RPU) would provide service to the project and has sewer lines running throughout the area. RPU operates a comprehensive wastewater collection, treatment, and disposal system that serves most of the City. Western Municipal Water District is responsible for collection and treatment of wastewater flows in only a small portion of the City. The City's wastewater collection system includes over 102.7 miles of gravity sewers and 18 wastewater pump stations.

Natural Gas

The Southern California Gas Company currently provides natural gas service to the project area and would serve the project site.

Solid Waste

According to the Public Facilities and Infrastructure Element, the Riverside Public Works Department collects trash from 70 percent of all households, including the Casa Blanca Neighborhood. All solid waste collected is shipped to the Robert A. Nelson Transfer Station, which is owned by the County of Riverside. The waste is then transferred to either the Badlands Landfill in Moreno Valley, the El Sobrante Landfill located east of Interstate 15 south of the City of Corona, or the Lamb Canyon Landfill located between the City of Beaumont and the City of San Jacinto for disposal (City of Riverside 2012).

Electricity

Electrical service in most of Riverside is provided by the City-owned Public Utilities Department, and the project area would be served by the Public Utilities Department. Southern California Edison generally serves customers outside of the City limits. The City's electric service system, established in 1895, includes almost 90 miles of transmission lines and over 1,000 miles of distribution lines. A benefit of a local electric provider is that energy rates are typically lower than other Southern California private utilities (City of Riverside 2012).

Project of Statewide, Regional, or Areawide Significance

The project does not meet the criteria of a project of Statewide, regional, or areawide significance.

2.4 - Project Objectives and Approvals

2.4.1 - Project Objectives

The objectives of the project are listed below:

- **OBJ-1:** Provide an educational institution to serve the Casa Blanca Neighborhood and surrounding areas.
- **OBJ-2:** Relieve over-capacity at neighboring schools.
- **OBJ-3:** Establish new facilities in a community where the demand for additional academic services and facilities is high, particularly at the elementary school level.
- **OBJ-4:** Establish an educational facility that serves to connect and enhance an existing neighborhood.

Source: Census 2000 Data, The CaSIL

FIRSTCARBON SOLUTIONS™

5 2.5 0 5 Miles

Exhibit 2-1
Regional Location Map

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RIVERSIDE UNIFIED SCHOOL DISTRICT
CASA BLANCA ELEMENTARY SCHOOL PROJECT
FOCUSED ENVIRONMENTAL IMPACT REPORT

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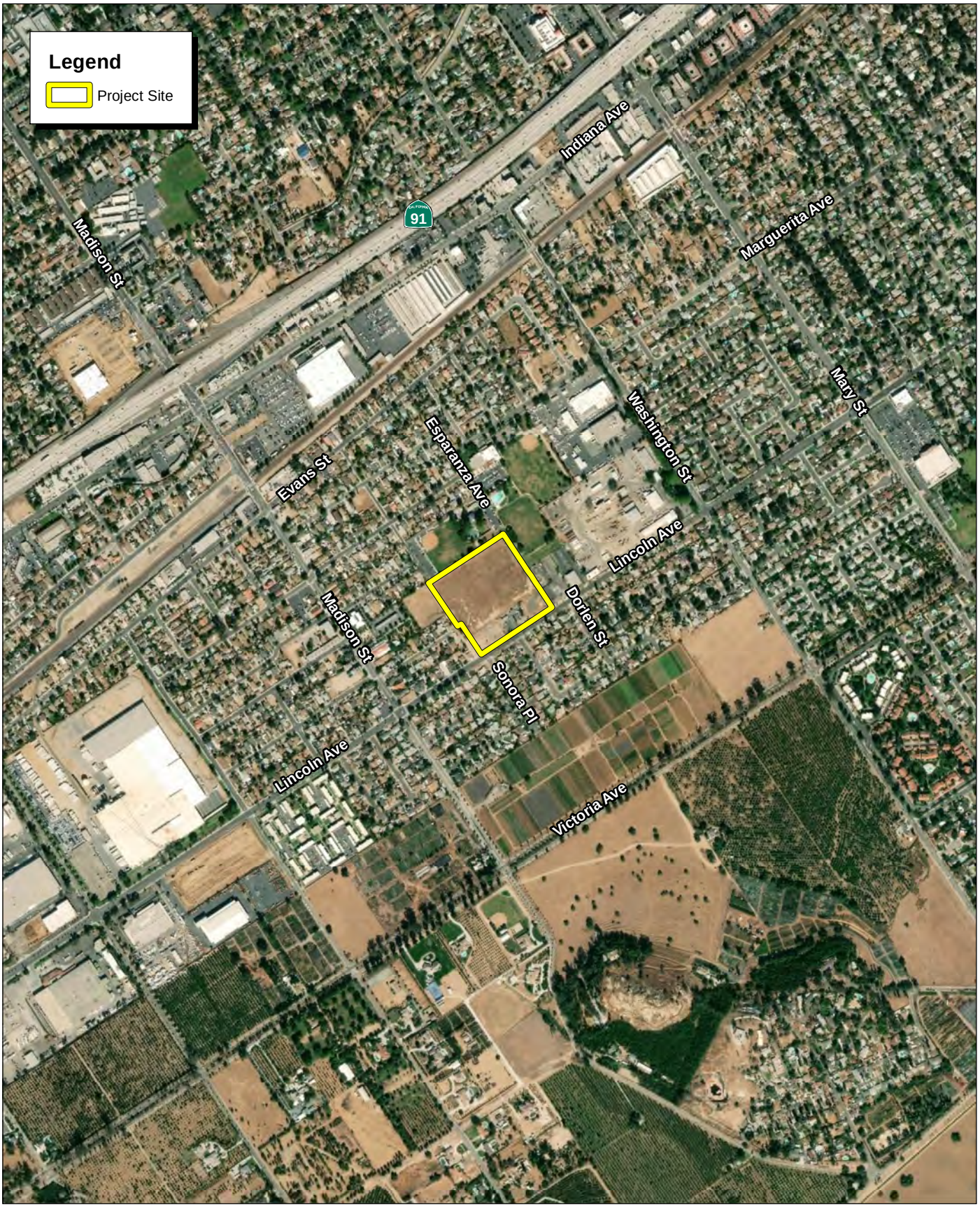

Source: ESRI Aerial Imagery. Riverside County Parcel Data.

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 2-2
Local Vicinity Map
Aerial Base

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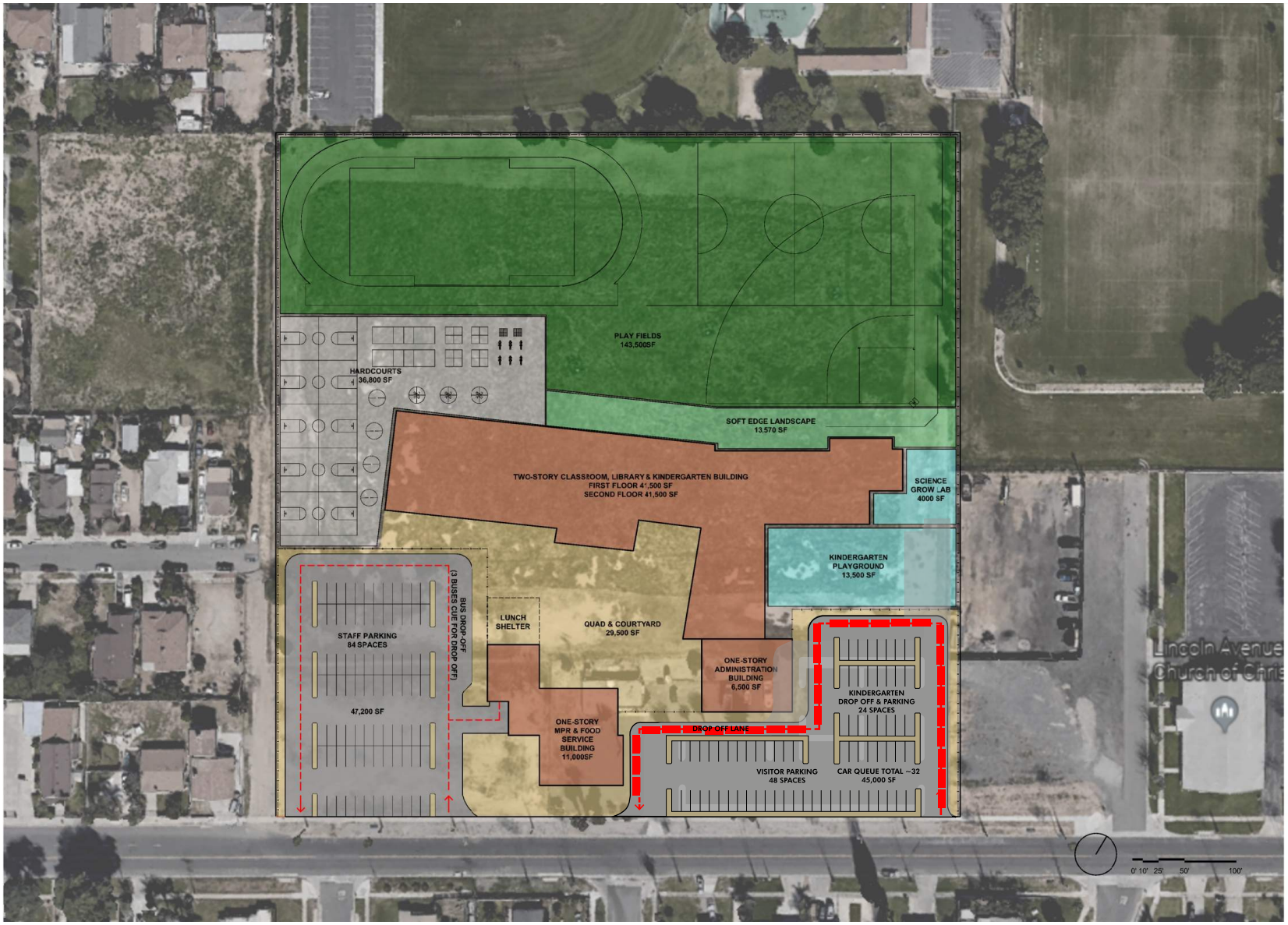

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Exhibit 2-3
Site Plan

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RIVERSIDE UNIFIED SCHOOL DISTRICT
CASA BLANCA ELEMENTARY SCHOOL PROJECT
FOCUSED ENVIRONMENTAL IMPACT REPORT

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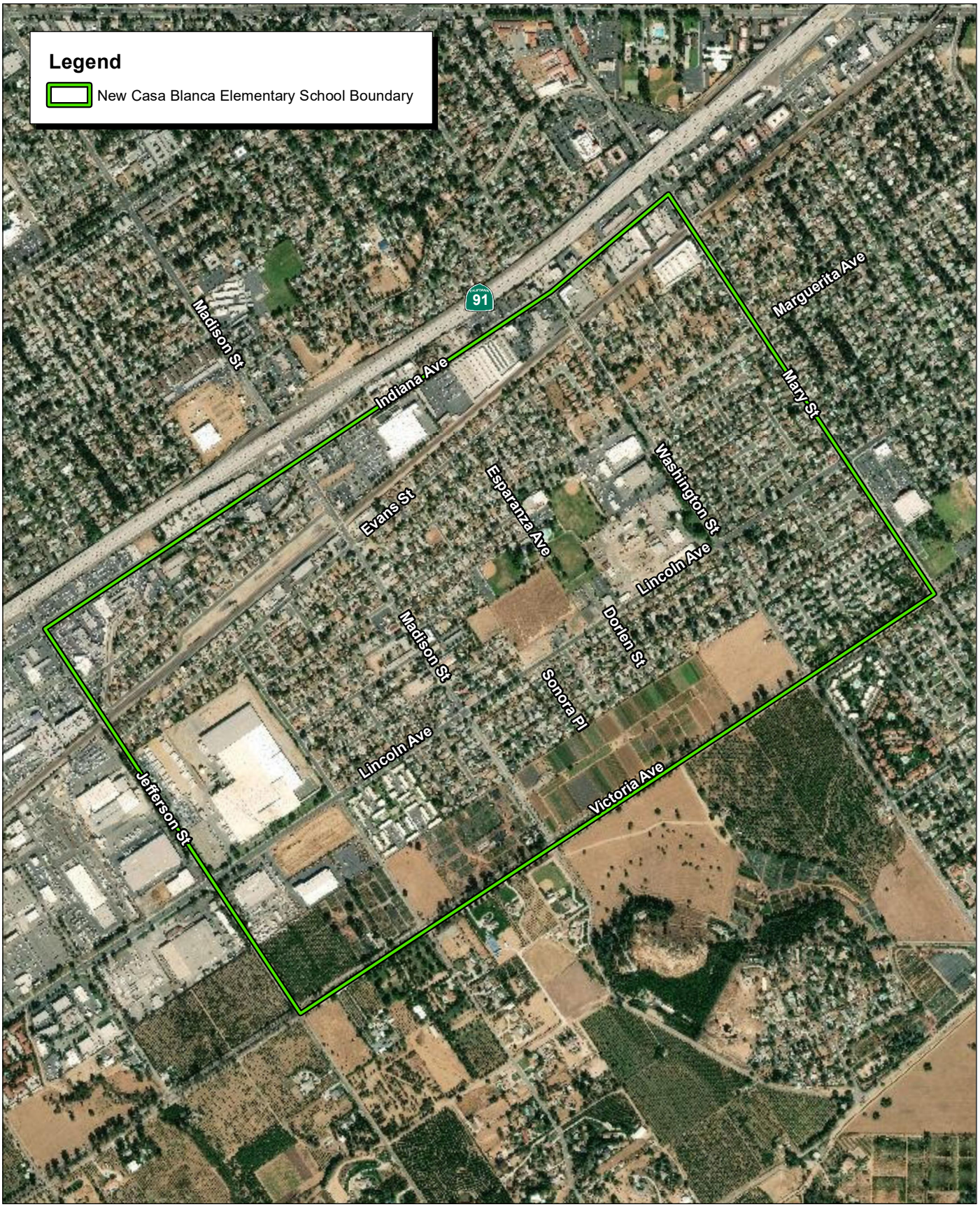

Source: ESRI Aerial Imagery.

FIRSTCARBON SOLUTIONS™

1,200 600 0 1,200 Feet

Exhibit 2-4
New Casa Blanca
Elementary School Boundary

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2.5 - Intended Uses of This Draft Focused EIR

This Draft Focused EIR is being prepared by the RUSD to assess the potential environmental impacts that may arise in connection with actions related to implementation of the project. Pursuant to CEQA Guidelines Section 15367, the RUSD is the lead agency for the project and has discretionary authority over the project and project approvals. The Draft Focused EIR is intended to address all public infrastructure improvements and all future development that are within the parameters of the project.

2.5.1 - Required Approvals

Discretionary approvals and permits are required for implementation of the project. The project would require the following discretionary approvals and actions, including:

- Site Plan and Design Review from RUSD, California Division of State Architect, and/or drainage and road improvement and related grading purposes from the City of Riverside
- Land Acquisition Agreement
- Vote of the RUSD Board per Government Code Section 53094 to render City zoning not applicable to the site; alternatively General Plan and Zoning Code Map Amendment from the City of Riverside and Planning Commission.

Subsequent ministerial actions would be required for the implementation of the project including Government Code 64502 issuance of grading and building permits.

2.5.2 - Responsible and Trustee Agencies

A number of other agencies in addition to the City of Riverside will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft Focused EIR will provide environmental information to these agencies and other public agencies, which may be required to grant approvals or coordinate with other agencies, as part of project implementation. These agencies may include, but are not limited to, the following:

- City of Riverside
- California Department of Education
- California Department of Toxic Substances Control

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SECTION 3: ENVIRONMENTAL IMPACT ANALYSIS

Approach to Environmental Analysis

This Draft Focused Environmental Impact Report (Draft Focused EIR) provides analysis of impacts for those environmental topics where it was determined in the Notice of Preparation, or through subsequent analysis, that the project would result in "potentially significant impacts." Sections 3.1 through 3.9 discuss the environmental impacts that may result from approval and implementation of the project.

Environmental Topics

The following environmental issues are addressed in Section 3, Environmental Impact Analysis:

3.1	Air Quality	3.6	Land Use and Planning
3.2	Biological Resources	3.7	Noise
3.3	Cultural Resources	3.8	Public Services
3.4	Greenhouse Gas (GHG) Emissions	3.9	Transportation and Traffic
3.5	Hydrology and Water Quality		

Organization of Issue Areas

Each environmental issue addressed in Sections 3.1 through 3.9 contains the following information:

1. The environmental setting as it relates to the specific issue.
2. The regulatory framework governing that issue.
3. The impact significance criteria.
4. An evaluation of the project-specific impacts and identification of mitigation measures.
5. A determination of the level of significance after mitigation measures are implemented.

Level of Significance

Determining the severity of project impacts is fundamental to achieving the objectives of California Environmental Quality Act (CEQA). CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Draft Focused EIR. If the Focused EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the Focused EIR.

The level of significance for each impact examined in this Draft Focused EIR was determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds were developed using criteria from the CEQA Guidelines and checklist; State, federal, and local

regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

Format Used for Impact Analysis and Mitigation Measures

The format to present the evaluation of impacts adopted in this Focused EIR is described and illustrated below.

Summary Heading of Impact

Impact AES-1:	**An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact number identifies the section of the report (AES for Aesthetics, Light, and Glare in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.**

Impact Analysis

A narrative analysis follows the impact statement.

Level of Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to State and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AES-1 Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact it is associated with (Mitigation Measure (MM) **AES-1** in this example); mitigation measures are numbered sequentially.

Level of Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation, with a summary discussion as to how any mitigation will reduce the impact.

Table 3-1: Environmental Abbreviations in Impacts and Mitigation Measures

Code	Environmental Issue
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural and Tribal Cultural Resources
GHG	Greenhouse Gas Emissions
HYD	Hydrology and Water Quality
LUP	Land Use and Planning
NOI	Noise
PS	Public Services
TRANS	Transportation and Traffic

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3.1 - Air Quality

3.1.1 - Introduction

This section describes the existing air quality setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on the Air Quality and Greenhouse Gas (GHG) Analysis Report (2018) prepared by FirstCarbon Solutions (FCS). The report is provided in Appendix B of this Draft Focused Environmental Impact Report (Draft Focused EIR).

3.1.2 - Environmental Setting

The proposed project is located in the City of Riverside within the South Coast Air Basin (SoCAB). Regional and local air quality are impacted by topography, dominant airflows, atmospheric inversions, location, and season. The following section describes these conditions as they pertain to the SoCAB.

South Coast Air Basin

The SoCAB consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. To the west of the SoCAB is the Pacific Ocean. To the north and east of the SoCAB are the San Gabriel, San Bernardino, and San Jacinto Mountains; while the southern limit of the SoCAB is the San Diego County line.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the western Riverside County area is transported inland until it reaches the mountains, where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). The average temperatures in the project area typically range from the 30s to 90s (Western Regional Climate Center 2016). The majority of the annual rainfall in the area occurs between November and April. The average annual precipitation at the nearest Cooperative Observer Program station, recorded at the Riverside Fire Station No. 3 in Riverside, California, is 10.21 inches (Western Regional Climate Center 2016).

3.1.3 - Regulatory Framework

Air pollutants are regulated to protect human health and for secondary effects such as visibility and building soiling. The Clean Air Act of 1970 tasks the United States Environmental Protection Agency (EPA) with setting air quality standards. The State of California also sets air quality standards that are in some cases more stringent than federal standards, and address additional pollutants. The following section describes these federal and State standards and the health effects of the regulated pollutants.

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. The EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Another set of limits intended to prevent environmental and property damage are called secondary standards (EPA 2016). The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide (SO_2)

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants.

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation, and required additional actions beyond the federal mandates. The California Air Resources Board (ARB) administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less stringent than the federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

Toxic Air Contaminants

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants. The 1990 Clean Air Act Amendments significantly expanded the EPA's authority to regulate hazardous air pollutants. Section 112 of the CAA lists 187 hazardous air pollutants to be regulated by source category. Authority to regulate these pollutants was delegated to individual states. ARB and local air districts regulate TACs and hazardous air pollutants in California.

Air Pollutant Description and Health Effects

The federal and State ambient air quality standards, relevant effects, properties, and sources of the air pollutants are summarized in Table 3.1-1.

Table 3.1-1: Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), nitrogen oxides (NO_X), and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind. Hot, sunny, and calm weather conditions are favorable to ozone formation.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_X) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.070 ppm[f]			
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide[b] (NO_2)	1 Hour	0.18 ppm	0.100 ppm[g]	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contribution to atmospheric discoloration; increased visits to hospital for respiratory illnesses.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO_X (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_X is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_X can react with compounds to form nitric acid and related small particles and result in PM-related health effects.	NO_X is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide (NO_2) forms quickly from NO_X emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Table 3.1-1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide[c] (SO_2)	1 Hour	0.25 ppm	0.075 ppm	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 (for certain areas)			
	Annual	—	0.030 ppm (for certain areas)			
Particulate matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	• Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.	Suspended particulate matter (PM) is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.
	Mean	20 µg/m^3	—			
Particulate matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3			
	Annual	12 µg/m^3	12 µg/m^3			
Visibility-reducing particles	8 Hour	See note below[d]				

Table 3.1-1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24 Hour	25 µg/m^3	—	Decrease in ventilatory function; aggravation of asthmatic symptoms; aggravation of cardio-pulmonary disease; vegetation damage; degradation of visibility; property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO_4^{2-}. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead[e]	30-day	1.5 µg/m^3	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	—	1.5 µg/m^3			
	Rolling 3-month average	—	0.15 µg/m^3			
Vinyl chloride[e]	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, the ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.
Hydrogen sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H_2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).

Table 3.1-1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Volatile organic compounds (VOC)		There are no State or federal standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.	Reactive organic gases (ROG), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, CO_2, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROG and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	DPM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total PM mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient PM pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Notes:
ppm = parts per million (concentration) $\mu g/m^3$ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

Table 3.1-1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources

[a] Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[b] To attain the 1-hour NO_2 national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb) (0.100 ppm).

[c] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[d] Visibility-reducing particles: In 1989, the ARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

[e] The ARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[f] The EPA Administrator approved a revised 8-hour ozone standard of 0.07 ppb on October 1, 2015. The new standard went into effect 60 days after publication of the Final Rule in the Federal Register. The Final Rule was published in the Federal Register on October 26, 2015 and became effective on December 28, 2015.

[g] The official level of the 1-hour NO_2 standard is 100 ppb, equal to 0.100ppm, which is shown here for the purpose of clearer comparison to the other standards.

Source of effects, properties, and sources: South Coast Air Quality Management District (SCAQMD) 2007; California Environmental Protection Agency (Cal/EPA) 2002; California Air Resources Board (ARB) 2009a; United States Environmental Protection Agency (EPA) 2003, 2009, 2009b, 2010, 2011, and 2012a; National Toxicology Program 2011a and 2011b and 2016.
Source of standards: California Air Resources Board (ARB) 2016a.

Several pollutants listed in Table 3.1-1 are not addressed in this analysis. Analysis of lead is not included in this report because no new sources of lead emissions are anticipated with the project. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter (PM) is addressed as PM_{10} and $PM_{2.5}$. No components of the project would result in vinyl chloride or hydrogen sulfide emissions in any substantial quantity.

Toxic Air Contaminants Health Effects

The California Almanac of Emissions and Air Quality—2009 Edition (ARB 2009b) presents the relevant concentration and cancer risk data for the 10 TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally

occurring asbestos can occur during soil-disturbing activities in areas with deposits present. No naturally occurring asbestos is located near the project site.

Federal Regulations

Air pollutants are regulated at the national, State, and air basin or county level; each agency has a different level of regulatory responsibility. The EPA regulates at the national level. The ARB regulates at the State level, and the South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans (SIPs), provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as the federal standards described earlier.

A SIP is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal air standards. The SIP for the State of California is administered by the ARB, which has overall responsibility for Statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts—an air district prepares their federal attainment plan, which is sent to the ARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

Areas designated non-attainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional State and local regulation is required to achieve the standards. Regulations adopted by California are described below.

California Regulations

Low-Emission Vehicle Program

The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 SIP. In 2012, the ARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and GHGs for new passenger vehicles (ARB 2012).

On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. California Code of Regulations Title 13, Section 1956.8, contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others (ARB 2013a).

ARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NO_X emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet's average NO_X emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014, for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

The latest amendments to the Truck and Bus Regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices (BMPs) to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings; however, no demolition is proposed as part of the project. In addition, asbestos is also found in a natural state, known as

naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found near the project site.

Diesel Risk Reduction Plan

The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020 (ARB 2000).

South Coast Air Quality Management District

Standard Conditions

During construction and operation, the project must comply with applicable rules and regulations. The following are rules and regulations the project may be required to comply with, either directly or indirectly.

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through the application of standard BMPs, such as the application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour (mph), sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with the best available control measures, so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression

techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors.

Rule 403 measures may include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code section 23114.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar BMPs shall be provided where vehicles enter and exit the construction site onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment. This rule would apply to the application of architectural coatings to the exterior and interior or of the building walls.

SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the SoCAB. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of the project must comply with SCAQMD Rule 1113.

SCAQMD Rule 1143 governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

SCAQMD CEQA Guidance

The SCAQMD has two roles under CEQA:

1. **Lead Agency:** responsible for preparing environmental analyses for its own projects (adoption of rules, regulations, or plans) or permit projects filed with the SCAQMD where the SCAQMD has primary approval authority over the project.
2. **Commenting Agency:** the SCAQMD reviews and comments on air quality analyses prepared by other public agencies (such as the project).

The SCAQMD also provides guidance and thresholds for CEQA air quality and GHG analyses. The result of this guidance as well as state regulations to control air pollution is an overall improvement in the project area.

Air Quality Management Plans

The agency for air pollution control for the Riverside County portion of the SoCAB is the SCAQMD. The SCAQMD is responsible for controlling emissions primarily from stationary sources. The SCAQMD maintains air quality monitoring stations throughout the SoCAB and a portion of the Salton Sea Air Basin. The SCAQMD is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the region, in coordination with the Southern California Association of Governments (SCAG).

An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the NAAQS and/or CAAQS. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

2016 AQMP

On March 3, 2017, the SCAQMD adopted the 2016 AQMP. The 2016 AQMP address strategies and measures to attain the 2008 federal 8-hour ozone standard by 2032, the 2012 federal annual $PM_{2.5}$ standard by 2021 to 2025, and the 2006 federal 24-hour $PM_{2.5}$ standard by 2019. The 2016 AQMP also examined the regulatory requirements for attaining the 2015 federal 8-hour ozone standard. The 2016 AQMP also updates previous attainment plans for ozone and $PM_{2.5}$ that have not yet been met (SCAQMD 2017). In general, the AQMP is updated every 3 to 4 years. However, the air quality planning process for the AQMP is continuous and each iteration is an update of the previous plan.

To ensure air quality goals will be met while minimizing impacts to the regional economy, the following policy objectives guided the development of the plan:

- Eliminate reliance on "black box" (future technologies) to the maximum extent possible by providing specific pathways to attainment with specific control measures.
- Calculate and take credit for co-benefits from other planning efforts (e.g., GHG reduction targets, energy efficiency, transportation).
- Develop a strategy with fair-share emission reductions at the federal, state, and local levels such as a new federal engine emission standards and/or additional authority provided to the state or SCAQMD for mobile sources.
- Seek significant funding for incentives to implement early deployment and commercialization of known zero and near-zero technologies.
- Invest in strategies and technologies meeting multiple objectives regarding air quality, climate change, air toxic exposure, energy, and transportation.
- Enhance the socioeconomic analysis and select the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets.
- Prioritize non-regulatory, innovative and "win-win" approaches for emission reductions.

The 2016 AQMP also demonstrates attainment of the 2008 Ozone Standard in Coachella Valley by 2026. The AQMP also demonstrates compliance with all applicable Federal Clean Air Act requirements pertaining to nonattainment areas pursuant to the EPA approved Implementation Rules, such as the annual average and summer planning emission inventory for criteria and precursor pollutants, attainment demonstrations, reasonably available control measure and reasonably available control technology analyses, reasonable further progress, particulate matter precursor requirements, vehicle miles traveled (VMT) demonstrations, and transportation conformity budgets for SoCAB.

The control measures in the 2016 AQMP are based on implementing all feasible control measures through the accelerated deployment of available cleaner technologies, BMPs, co-benefits from existing programs, and incentive measures. The 2016 AQMP control measures consist of three main components: (1) the SCAQMD's Stationary and Mobile Source Control Measures; (2) suggested State and federal Source Control Measures; and (3) Regional Transportation Plan Transportation Control Measures provided by SCAG. These measures rely on not only the traditional command-and-control approach, but also public incentive programs, as well as advanced technologies expected to be developed and deployed in the next several years.

Local

The City of Riverside adopted its General Plan in November of 2007 (City of Riverside General Plan 2025). The City's applicable air quality goals and policies from the Air Quality Element are listed below.

Air Quality Goals and Policies

Environmental Justice

- **Policy AQ-1.1:** Ensure that all land use decisions, including enforcement actions, are made in an equitable fashion to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status or geographic location, from the health effects of air pollution.
- **Policy AQ-1.2:** Consider potential environmental justice issues in reviewing impacts (including cumulative impacts for each project proposed).

Sensitive Receptors

- **Policy AQ-1.3:** Separate, buffer and protect sensitive receptors from significant sources of pollution to the greatest extent possible.
- **Policy AQ-1.4:** Facilitate communication between residents and businesses on nuisance issues related to air quality.

Land Densities

- **Policy AQ-1.26:** Require neighborhood parks and community centers near concentrations of residential areas to include pedestrian walkways and bicycle paths to encourage non-motorized travel.

Transportation

- **Policy AQ-2.5:** Consult with the California Air Resources Board to identify ways that it may assist the City (e.g., providing funding, sponsoring programs) with its goal to reduce air pollution by reducing emissions from mobile sources.
- **Policy AQ-2.8:** Work with Riverside Transit Authority (RTA) to establish mass transit mechanisms for the reduction of work-related and non-work-related vehicle trips.

Transportation System Management Improvements

- **Policy AQ-2.19:** Cooperate with local, regional, State and Federal jurisdictions to better manage transportation facilities and fleets.

Encouraging the Use of Alternative Fuels

- **Policy AQ-2.24:** Support full compliance with the SCAQMD's Clean Fleet Rules.
- **Policy AQ-2.25:** Support the development of alternative fuel infrastructure that is publicly accessible.
- **Policy AQ-2.26:** Allow or encourage programs for priority parking or free parking in City parking lots for alternative fuel vehicles, especially zero and super ultra low emission vehicles (ZEVs and SULEVs).

Stationary Pollution Sources

- **Policy AQ-3.1:** Continue the City's program to offer audits to show how to reduce energy including programmable thermostats, etc.
- **Policy AQ-3.4:** Require projects to mitigate, to the extent feasible, anticipated emissions that exceed AQMP Guidelines.

- **Policy AQ-3.6:** Support "green" building codes that require air conditioning/filtration installation, upgrades or improvements for all buildings, but particularly for those associated with sensitive receptors.
- **Policy AQ-3.7:** Require use of pollution control measures for stationary and area sources through the use of best available control activities, fuel/material substitution, cleaner fuel alternatives, product reformulation, change in work practices and of control measures identified in the latest AQMP.

Control Measures

- **Policy AQ-4.5:** Require the suspension of all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.

Energy Conservation

- **Policy AQ-5.1:** Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills.
- **Policy AQ-5.2:** Develop incentives and/or regulations regarding energy conservation requirements for private and public developments.
- **Policy AQ-5.3:** Continue and expand use of renewable energy resources such as wind, solar, water, landfill gas, and geothermal sources.
- **Policy AQ-5.4:** Continue and expand the creation of locally-based solar photovoltaic power stations in Riverside.
- **Policy AQ-5.5:** Continue and expand Riverside Public Utilities' programs to promote energy efficiency.
- **Policy AQ-5.6:** Support the use of automated equipment for conditioned facilities to control heating and air conditioning.

Public Education

- **Policy AQ-6.3:** Work with school districts to develop air quality curriculum for students, and continue Riverside Public Utilities' Energy Education Program.
- **Policy AQ-6.4:** Encourage, publicly recognize and reward innovative approaches that improve air quality.
- **Policy AQ-6.5:** Involve environmental groups, the business community, special interests and the general public in the formulation and implementation of programs that effectively reduce airborne pollutants.
- **Policy AQ-6.9:** Continue Riverside Public Utilities' Green Power public information program to increase awareness of renewable energy resources.

Multi-Jurisdictional Cooperation

- **Policy AQ-7.1:** Promote and participate with regional and local agencies, both public and private, to protect and improve air quality.
- **Policy AQ-7.4:** Coordinate with the SCAQMD to ensure that the City's air quality plans regarding reduction of air pollutant emissions are being enforced.

- **Policy AQ-7.5:** Establish and implement air quality, land use and circulation measures that improve not only the City's environment, but also that of the entire region.
- **Policy AQ-7.9:** Adhere with Federal, State and regional air quality laws, specifically with Government Code Section 65850.2, which requires that each owner or authorized agent of a project indicate, on the development or building permit for the project, whether he/she will need to comply with the requirements for a permit for construction or modification from the SCAQMD.

Waste Reduction

- **Policy AQ-8.16:** Implement programs to encourage and increase participation of diverted waste from landfills by 2 percent before the end of 2008.
- **Policy AQ-8.17**: Develop measures to encourage that a minimum of 40 percent of the waste from all construction sites throughout Riverside be recycled by the end of 2008.
- **Policy AQ-8.18:** Encourage the reduction of any disposable, toxic, or non-renewable products (example: no pharmaceuticals or paint down the drain) by 5 percent through program creation by 2009.

ARB Air Quality Land Use Handbook

Table 3.1-2 lists the following ARB advisory recommendations that address the issue of siting "sensitive land uses" near specific sources of air pollution (ARB 2005):

- High traffic freeways and roads
- Distribution centers
- Rail yards
- Ports
- Refineries
- Chrome plating facilities
- Dry cleaners
- Large gas dispensing facilities

The ARB recommended screening distances are shown in Table 3.1-2 below.

Table 3.1-2: Recommendations on Siting New Sensitive Land Uses

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.

Table 3.1-2 (cont.): Recommendations on Siting New Sensitive Land Uses

Source Category	Advisory Recommendations
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.
Note: These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.	

3.1.4 - Existing Conditions

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. Table 3.1-3 summarizes 2015 through 2017 published monitoring data, which is the most recent three-year period available. The table displays data from the Riverside-Rubidoux monitoring station (located approximately 4.8 miles north of the project site). The data shows that during the past few years, the project area has exceeded the standards for ozone (State and national), PM_{10} (State), and $PM_{2.5}$ (national). The data in the table reflects the concentration of the pollutants in the air, measured using air monitoring equipment. This differs from emissions, which are calculations of a pollutant being emitted over a certain period. No recent monitoring data for Riverside County or the South Coast Air Basin was available for CO or SO_2. Generally, no monitoring is conducted for pollutants that are no longer likely to exceed ambient air quality standards.

Table 3.1-3: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2015	2016	2017
Ozone[1]	1 Hour	Max 1 Hour (ppm)	**0.132**	**0.142**	**0.145**
		Days > State Standard (0.09 ppm)	31	33	47
	8 Hour	Max 8 Hour (ppm)	**0.106**	**0.105**	**0.119**
		Days > State Standard (0.07 ppm)	59	71	82
		Days > National Standard (0.070 ppm)	55	69	81
Carbon monoxide (CO)	8 Hour	Max 8 Hour (ppm)	ND	ND	ND
		Days > State Standard (9.0 ppm)	ND	ND	ND
		Days > National Standard (9 ppm)	ND	ND	ND
Nitrogen dioxide (NO_2)[1]	Annual	Annual Average (ppm)	0.014	0.014	0.014
	1 Hour	Max 1 Hour (ppm)	0.057	0.073	0.063
		Days > State Standard (0.18 ppm)	0	0	0
Sulfur dioxide (SO_2)	Annual	Annual Average (ppm)	ND	ND	ND
	24 Hour	Max 24 Hour (ppm)	ND	ND	ND
		Days > State Standard (0.04 ppm)	ND	ND	ND
Inhalable coarse particles (PM_{10})[1]	Annual	Annual Average (µg/m^3)	40.0	38.1	41.3
	24 hour	24 Hour (µg/m^3)	**107.4**	**170.5**	**137.6**
		Days > State Standard (50 µg/m^3)	92.2	ID	102.5
		Days > National Standard (150 µg/m^3)	0.0	0.0	0.0
Fine particulate matter ($PM_{2.5}$)[1]	Annual	Annual Average (µg/m^3)	15.3	12.6	14.5
	24 Hour	24 Hour (µg/m^3)	**61.1**	**60.8**	**50.3**
		Days > National Standard (35 µg/m^3)	10.3	5.1	7.2

Notes:
> = exceed ppm = parts per million µg/m^3 = micrograms per cubic meter
ID = insufficient data ND = no data max = maximum
Bold = exceedance
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
[1] Riverside-Rubidoux
Source: ARB 2018.

Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the SoCAB are shown in Table 3.1-4. With respect to the CAAQS, the Riverside County portion of the SoCAB is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, and attainment or unclassified for all other pollutants. With respect to the NAAQS, the Riverside County portion of the SoCAB is nonattainment for ozone, $PM_{2.5}$, and lead and attainment or unclassified for all other pollutants.

Table 3.1-4: South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone (1-hour) [a]	Nonattainment	N/A
Ozone (8-hour)	Nonattainment	Nonattainment—Extreme
Carbon monoxide	Attainment	Attainment (Maintenance)
Nitrogen dioxide (annual)	Attainment	Attainment (Maintenance)
Nitrogen dioxide (1-hour)	Attainment	Unclassifiable/Attainment
Sulfur dioxide	Unclassifiable/Attainment	Unclassified/Attainment
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment (Serious)
Lead (Riverside County)	—	Attainment
Hydrogen Sulfide (H_2S)	Attainment	—
Sulfates	Attainment	—
Vinyl Chloride	Attainment	—

Notes:
[a] On June 15, 2005 the 1-Hour Ozone NAAQS was revoked for all areas except the 8-Hour Ozone nonattainment Early Action Compact areas.
Source: SCAQMD 2016a

3.1.5 - Methodology

Model Selection and Guidance

Regional air pollutant emissions are composed of those on-site and off-site construction and operational emissions generated from all facets of the project. Air pollutant emissions can be estimated by using emission factors and a level of activity. Emission factors represent the emission rate of a pollutant over a given time or activity; for example, grams of NO_X per vehicle mile traveled or grams of NO_X per horsepower hour of equipment operation. The activity factor is a measure of how active a piece of equipment is and can be represented as the amount of material processed,

elapsed time that a piece of equipment is in operation, horsepower of a piece of equipment used, the amount of fuel consumed in a given amount of time, or vehicle miles traveled per day. The ARB has published emission factors for on-road mobile vehicles/trucks in the EMission FACtors (EMFAC) mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. An air emissions model (or calculator) combines the emission factors and the levels of activity and outputs the emissions for the various pieces of equipment.

The California Emissions Estimator Model (CalEEMod) was developed in cooperation with the SCAQMD and other air districts throughout the state. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with construction and operation from a variety of land uses.

The current version of CalEEMod, version 2016.3.2, uses OFFROAD2011 and EMFAC2014 emission factors.

The emissions models used in this analysis are summarized as follows:

- Construction emissions: CalEEMod, version 2016.3.2
- Operational emissions: CalEEMod, version 2016.3.2

Construction

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and application of architectural coatings would release VOC emissions. Off-site emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $PM_{2.5}$).

Construction activities would consist of mass grading, building construction, asphalt paving of roadways, and architectural coating of the inside and outside of the buildings. For each construction activity, the construction equipment operating hours and numbers represent the average equipment activity over the duration of the activity. A conceptual construction schedule is provided in Table 3.1-5 that presents the duration for each construction activity. Table 3.1-6 presents the number of assumed construction equipment along with hours of operation per day, horsepower, and load factor. Where project-specific information was not available or unknown, default assumptions were used to complete emissions modeling. During grading, the soil requirements are expected to be balanced on-site. The activity for construction equipment is based on the horsepower and load factors of the equipment. In general, the horsepower is the power of an engine—the greater the horsepower, the greater the power. The load factor is the average power of a given piece of equipment while in operation compared with its maximum rated horsepower. A load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity. This analysis uses the CalEEMod default load factors for off-road equipment.

For purposes of a conservative analysis, project construction is anticipated to begin in June 2020 and was assumed to last for approximately fourteen months. The construction schedule used in the analysis represents a "worst-case" analysis scenario since emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and compliance with more stringent regulatory requirements. Therefore, construction emissions would likely decrease if the construction schedule moves to later years. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required by the CEQA Guidelines. Full construction emissions modeling parameters and assumptions are provided in Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR.

Table 3.1-5: Conceptual Construction Schedule

Construction Phase	Construction Schedule		Working Days
	Start Date	End Date	
Site Preparation	6/1/2020	6/12/2020	10
Grading	6/13/2020	7/10/2020	20
Building Construction	7/11/2020	5/28/2021	230
Paving	5/29/2021	6/25/2021	20
Architectural Coating	6/26/2021	7/23/2021	20

Source: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).

Table 3.1-6: Project Construction Equipment Assumptions

Phase Name	Equipment	Number	Hours per day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	3	8	247	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	1	8	158	0.38
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.40
	Tractors/Loaders/Backhoes	3	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.20
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45

Table 3.1-6 (cont.): Project Construction Equipment Assumptions

Phase Name	Equipment	Number	Hours per day	Horsepower	Load Factor
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38
Architectural Coating	Air Compressors	1	6	78	0.48
Source: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).					

A summary of the construction-related vehicle trips is shown in Table 3.1-7. CalEEMod defaults for construction trips, trip lengths, and vehicle fleets were used. Note that the total number of off-site construction vehicle trips would not necessarily occur on the same day, since the various construction activities would vary each day and during the construction time period.

Table 3.1-7: Construction Off-site Trips

Construction Activity	Worker (Trips per day)	Vendor (Trips per day)	Haul (Total Trips)
Site Preparation	18	0	0
Grading	15	0	0
Building Construction	197	77	0
Paving	15	0	0
Architectural Coating	39	0	0
Source: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).			

Fugitive Dust

During grading activities, fugitive dust can be generated from the movement of dirt on the project site. CalEEMod estimates dust from dozers moving dirt around, dust from graders or scrapers leveling the land, and loading or unloading dirt into haul trucks. Every project within the SCAQMD's jurisdiction is required to comply with the requirements of SCAQMD Rule 403 (Fugitive Dust). SCAQMD Rule 403 requires fugitive dust generating activities follow best available control measures to reduce emissions of fugitive dust. As shown in Table 3.1-8, per SCAQMD guidance, the Rule 403 measures are accounted for in CalEEMod through selection of the appropriate mitigation measures in CalEEMod.

Table 3.1-8: Best Available Control Measures

Best Available Control Measure	Associated Measure in CalEEMod
Clearing and Grubbing	
02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing. 02-2 Stabilize soil during clearing and grubbing activities. 02-3 Stabilize soil immediately after clearing and grubbing activities.	Water exposed surfaces three times per day
Earth Moving Activities	
08-1 Pre-apply water to depth of proposed cuts 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction	Achieve 12 percent moisture content on unpaved roads
08-3 Stabilize soils once earth-moving activities are complete	Water exposed surfaces three times per day
Import/Export of Bulk Materials	
09-1 Stabilize material while loading to reduce fugitive dust emissions.	Water exposed surfaces three times per day
09-3 Stabilize material while transporting to reduce fugitive dust emissions. 09-4 Stabilize material while unloading to reduce fugitive dust emissions.	Water exposed surfaces three times per day
Landscaping	
10-1 Stabilize soils, materials, slopes	Water exposed surfaces three times per day
Staging Areas	
13-1 Stabilize staging areas during use by limiting vehicle speeds to 15 miles per hour.	Reduce speed on unpaved roads to 15 miles per hour.
Traffic Areas for Construction Activities	
15-1 Stabilize all off-road traffic and parking areas.	Water exposed surfaces three times per day
Source of Best Available Control Measures: SCAQMD Rule 403. Source of associated CalEEMod measures: Source: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).	

Operation

Operational emissions are those emissions that occur during operation of the project. The major sources are summarized below.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the motor vehicles that would travel to and from and within the project site. The regional emissions from the project's

mobile sources were estimated using the CalEEMod model. The trip generation rates for the project were adjusted in the model based on information obtained from the project's Traffic Impact Analysis report (Linscott, Law & Greenspan, Engineers [LLG] 2018). Table 3.1-9 presents the forecasted daily trip generation rates from the Traffic Impact Analysis. No other changes were made to the default mobile-source parameters.

Table 3.1-9: Project Traffic Generation Forecast

Land Use	Quantity	Units	Weekday Trip Generation Rate (trips/unit/day)	Weekday Trips
Casa Blanca Elementary School	800	Students	1.89	1,512
Source: (LLG) 2018				

Other Emission Sources

Area Sources

In addition to the typical mobile- and energy-source emissions, long-term operational emissions also include area-source emissions. Area-source emissions include occasional architectural coating activities for repainting and maintenance of the proposed buildings. CalEEMod assumes that repainting occurs at a rate of 10 percent of the total proposed buildings per year. Therefore, on average, it is assumed that the buildings are fully repainted every 10 years.

Other area-source emissions include consumer products that involve solvents that emit VOCs during their product use. CalEEMod includes default consumer product use rates based on the building square footage.

Lastly, CalEEMod includes area-source emission calculations for landscape maintenance equipment. CalEEMod default emission factors for landscape maintenance equipment were used in this analysis.

Indirect Emissions

CalEEMod contains calculations to estimate indirect emissions. Indirect emissions are emissions where the location of consumption or activity is different from where the actual emissions are generated. For example, electricity would be consumed at the proposed elementary school; however, the emissions associated with producing that electricity are generated off-site at the power plant. Indirect emissions are calculated in CalEEMod for GHG emissions and are not relevant to this air quality analysis. Energy-source emissions are those associated with electricity consumption and are more pertinent for GHG emissions than criteria pollutants.

Natural Gas

There would be emissions from the combustion of natural gas used for the project (water heaters, heat, etc.). CalEEMod has two categories for natural gas consumption: Title 24 and non-Title 24. CalEEMod default natural gas consumption rates were used, based on the proposed land use types.

Localized Assessment

Whereas the regional estimation of emissions quantifies the project's total emissions that could be dispersed throughout the region, the estimation of the project's local construction and operational emissions focuses on the emissions that the project generates on the project site or affect the local area surrounding the project site.

Construction

The project's localized construction emissions would consist of those emissions generated from on-site construction activities including grading, building construction, paving, and architectural coating. The localized construction emissions result exhaust emissions from the operation of off-road construction equipment and the generation of fugitive dust from earth-moving activities. CalEEMod provides emissions outputs that separate the on- and off-site construction emissions. For the localized emissions analysis, only on-site emissions were used to compare with SCAQMD's Localized Significant Thresholds (LSTs).

Operation

The project's operational emissions occur from a variety of sources described above; however, a majority of long-term operational emissions occur off-site as mobile-source emissions. The localized assessment methodology limits the emissions that are analyzed to those generated from on-site activities. Therefore, only on-site operational emissions were used to compare with SCAQMD's operational LSTs. To account for on-site vehicle emissions, one twenty-fifth of the CalEEMod calculated mobile source emissions were used, which is equivalent to the project's mobile-source emissions with a half-mile trip length.

3.1.6 - Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, air quality impacts would occur if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people.

The SCAQMD has developed daily regional and localized thresholds of significance to evaluate construction and operational emissions within its jurisdiction to address the CEQA Guidelines. The established emissions thresholds were based on the attainment status of the air basin relative to air quality standards for specific criteria pollutants. Because the concentration standards were set at a

level that protects public health with an adequate margin of safety, these emissions thresholds are considered conservative and would overstate an individual project's contribution related to air quality and health risks.

Regional Thresholds

Construction Emissions

Projects in the SoCAB would generate significant construction-related regional emissions if daily emissions would exceed:

- 75 pounds per day of VOC, also known as reactive organic gases (ROG);
- 100 pounds per day of NO_X;
- 550 pounds per day of CO;
- 150 pounds per day of sulfur oxides (SO_X);
- 150 pounds per day of PM_{10}; or
- 55 pounds per day of $PM_{2.5}$.

Regional Thresholds for Operational Emissions

Projects in the SoCAB would generate significant operational regional emissions if daily emissions would exceed:

- 55 pounds per day of VOC;
- 55 pounds per day of NO_X;
- 550 pounds per day of CO;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; or
- 55 pounds per day of $PM_{2.5}$.

Localized Air Quality Significance Thresholds

SCAQMD recommends that all air quality analyses include a localized assessment of both construction and operational emissions on nearby sensitive receptors. LSTs represent the maximum mass emissions from a project site that would not result in pollutant concentrations that exceed NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the Source Area Receptor (SRA) where a project is located, the distance to the nearest sensitive receptor, and the size of the project site, all of which are the primary factors that influence pollutant concentrations.

The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003, revised 2009) for guidance. The LST Methodology assists lead agencies in analyzing localized air quality impacts, particularly CO, NO_X, PM_{10}, and $PM_{2.5}$. The SCAQMD also provided screening look up tables for projects that disturb less than or equal to 5 acres in size. The appropriate LSTs can be determined based on the project's SRA, size, and distance to nearest sensitive receptor.

The appropriate SRA to obtain LSTs from is SRA 23-Metropolitan Riverside County Area, since this area includes the project site. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-

up tables for projects that disturb less than or equal to 5 acres in size. The project site is approximately 9.8 acres; therefore, LSTs were obtained for a 5-acre site.

The nearest off-site sensitive receptors are single-family residential units located approximately 12 meters (40 feet) southwest of the project site. According to LST methodology, any receptor located closer than 25 meters (82 feet) shall utilize the 25-meter thresholds depicted in the look-up tables.

Table 3.1-10 below shows the LSTs for NO_2, CO, PM_{10}, and $PM_{2.5}$ for both construction and operational activities.

Table 3.1-10: SCAQMD Local Air Quality Thresholds of Significance

Activity	Allowable Emissions (pounds/day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction	270	1,577	4	2
Operation	270	1,577	4	2

Notes:
[1] The nearest sensitive receptors are single-family homes located 12 meters (40 feet) southwest of the project site. According to SCAQMD Methodology, all receptors closer than 25 meters are based on the 25-meter threshold.
Source: SCAQMD Mass Rate Look-Up Tables for a 5-acre site in SRA 23, Metropolitan Riverside County

Health Risk Significance Thresholds

For pollutants without defined significance standards or air contaminants not covered by the standard criteria cited above, the definition of substantial pollutant concentrations varies. For TACs, “substantial” is taken to mean that the individual cancer risk exceeds a threshold considered to be a prudent risk management level.

The SCAQMD has defined several health risk significance thresholds that it recommends to Lead Agencies in assessing a project’s health risk impacts. The City of Riverside has not adopted its own set of thresholds. Therefore, the following SCAQMD thresholds were adopted for the project.

The SCAQMD has established the following project-specific health risk significance thresholds (SCAQMD 2015b):

- Maximum Incremental Cancer Risk: >=10 in 1 million.
- Hazard Index (project increment) >=1.0.

A significant impact would occur if a project’s impacts exceeded any of these thresholds.

Cumulative Significance Thresholds

The SCAQMD has published a report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (SCAQMD 2003c). Projects that exceed the project-specific significance thresholds are considered by the

SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

3.1.7 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Consistency with Air Quality Management Plan

Impact AIR-1:	**The project would not conflict with or obstruct implementation of the applicable air quality plan.**

Impact Analysis

To evaluate whether or not a project conflicts with, or obstructs the implementation of the applicable air quality plan (2016 AQMP for the SoCAB), the *SCAQMD CEQA Air Quality Handbook* states that there are two key indicators. These indicators are evaluated by the criteria discussed below.

1. **Indicator:** Whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
2. **Indicator:** According to Chapter 12 of the SCAQMD CEQA Air Quality Handbook, the purpose of the General Plan consistency findings is to determine whether a project is inconsistent with the growth assumptions incorporated into the air quality plan, and thus, whether it would interfere with the region's ability to comply with federal and California air quality standards.

Considering the recommended criteria in the SCAQMD's 1993 Handbook, this analysis uses the following criteria to address this potential impact:

- **Step 1:** Project's contribution to air quality violations (SCAQMD's first indictor)
- **Step 2:** Assumptions in AQMP (SCAQMD's second indictor)
- **Step 3:** Compliance with applicable emission control measures in the AQMPs

Step 1: Project's Contribution to Air Quality Violations

According to the SCAQMD, the project is consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (SCAQMD AQMP 1993, page 12-3).

If a project's emissions do not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$, it follows that the project's emissions would not exceed the allowable limit for each project

in order for the region to attain and maintain ambient air quality standards, which is the primary goal of air quality plans. As shown in Impact AIR-2 below, the project's regional construction and operational emissions would not exceed the SCAQMD regional thresholds of significance. Furthermore, as described in Impact AIR-4 below, the project's localized construction and operational emissions would not exceed the project location-specific SCAQMD LSTs. Considering this information, the project's construction and operational emissions would not contribute substantially to potential air quality violations and thus would comply with the applicable air quality plan. The project would be less than significant under this criterion.

Step 2: Assumptions in AQMP

The development of emission burdens used in AQMPs to demonstrate compliance with ambient air quality standards is based, in part, on land use patterns contained within local general plans. Therefore, it is reasonable to conclude that if a project is consistent with the applicable general plan land use designation, and if the general plan was adopted prior to the applicable AQMP, then the growth of VMT and/or population generated by said project would be consistent with the growth in VMT and population assumed within the AQMP.

As discussed Section 1.2, the General Plan Land Use designation for the project site is High Density Residential (HDR). The current zoning designation for the project site is R-3-1500 for Multi-Family Residential zoning. The HDR designation allows for a maximum of 29 dwelling units/acre or 18.6 persons/acre and is primarily intended for multi-family residential use. The RUSD Board of Education has the discretion to find the City's zoning inapplicable and develop an elementary school on the project site.[1] Alternatively, the City could process a General Plan Amendment and Zoning Code Amendment rezoning the site to a Public Facilities use. Because the planned use and the designated use differ, the VMT traveled for the planned and designated land uses were estimated.

As shown in Table 3.1-11 below, re-designation of the site would not result in an increased number of VMT. Table 3.1-11 shows the estimated annual VMT for the 9.8-acre project site under two scenarios: (1) developed as a 284-unit multi-family residential development, consistent with the current General Plan designation; and (2) developed as a new elementary school, in accordance with the project. As shown in Table 3.1-11, the project would reduce annual VMT compared to the multi-family residential development scenario. This reduction is attributable to the different trip generation rates associated with the multi-family residential development and the project. The elementary school development project is estimated to have an average weekday trip generation of 1,512 trips per day, while a multi-family residential development is estimated to have an average weekday trip generation rate of 2,079 trips per day.

[1] Government Code section 53094(b) provides that the governing board of a "school district" by a two-thirds vote "may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district."

Table 3.1-11: Vehicle Miles Traveled Comparison

Scenario	Total Annual VMT
Project site developed as a 284-unit multi-family residential development, consistent with the current General Plan designation	7,073,348
Project site developed in accordance with the project	3,722,095

Notes:
VMT = vehicle miles traveled
Source of existing general plan land use designation VMT: CalEEMod output based on trip generation rates from the *Institute of Transportation Engineers Trip Generation Manual, 10th Edition*.
Source of project VMT: CalEEMod output based on assumptions consistent with the Focused Traffic Study for the Casa Blanca Elementary School Project prepared for the project by LLG (2018). See Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR for complete CalEEMod output files.

Because the project would not increase the VMT generated by the project site compared to the assumptions used in the AQMP, it is reasonable to conclude that the project would not adversely affect the AQMP. Therefore, growth supported by the project is reasonably accounted for in the AQMP. The project would be less than significant under this criterion.

Step 3: Control Measures

The AQMP contains a number of control measures, which are enforceable requirements through the adoption of rules and regulations. A detailed description of rules and regulations that apply to this project is provided in Section 2.4.2, South Coast Air Quality Management District. The project would comply with all applicable SCAQMD rules and regulations. Therefore, the project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

Summary

In summary, the project would not exceed the growth assumptions in the AQMP. The project would not result in a regional or localized exceedance of criteria air pollutants and would comply with all applicable SCAQMD rules and regulations. Accordingly, the project would not conflict with or obstruct implementation of the applicable air quality plans, and, therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Potential for Air Quality Standard Violation

Impact AIR-2: The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact Analysis

This impact is related to regional criteria pollutant impacts. The nonattainment regional pollutants of concern are ozone, PM_{10}, and $PM_{2.5}$. Ozone is not emitted directly into the air but is a regional pollutant formed by photochemical reactions in the atmosphere. Ozone precursors, VOC and NO_X, react in the atmosphere in the presence of sunlight to form ozone. Therefore, the SCAQMD does not have a recommended ozone threshold, but it does have thresholds of significance for VOC and NO_X.

As discussed in Section 3.1.3, Thresholds of Significance, a project that would not generate daily regional emissions that exceed SCAQMD's thresholds would also not violate or contribute substantially to an existing or projected air quality violation. The project's regional construction and operational emissions, which include both on-site and off-site emissions, are evaluated separately below.

Construction Regional Emissions

Construction emissions are described as "short-term" or temporary in duration; however, they have the potential to represent a significant impact with respect to air quality. Construction of the project would result in the temporary generation of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions from construction activities such as demolition, grading, building construction, architectural coating, and asphalt paving. Fugitive particulate matter (PM) dust emissions are primarily associated with earth disturbance and grading activities, and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles on-site and off-site. Construction-related NO_X emissions are primarily generated by exhaust emissions from heavy-duty construction equipment, material and haul trucks, and construction worker vehicles. VOC emissions are mainly generated by exhaust emissions from construction vehicles, off-gas emissions associated with architectural coatings and asphalt paving.

Table 3.1-12 presents the project's maximum daily construction emissions for each construction activity and during the entire construction duration using the worst-case summer or winter daily construction-related criteria pollutant emissions for each phase of construction. For detailed assumptions, methodologies, and models used to estimate emissions, please refer to Section 3.2.1, Methodology, and/or Appendix B of this Focused EIR.

Table 3.1-12: Regional Construction Emissions by Construction Activity

Construction Activity	Regional Pollutant Emissions (pounds per day)[1]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2020						
Site Preparation	4.2	42.5	22.2	0.0	9.4	5.9
Grading	2.5	26.4	16.7	0.0	4.0	2.5

Table 3.1-12 (cont.): Regional Construction Emissions by Construction Activity

Construction Activity	Regional Pollutant Emissions (pounds per day)[1]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Building Construction—2020	3.3	27.7	26.2	0.1	3.9	1.8
2021						
Building Construction—2021	3.0	25.0	25.1	0.1	3.7	1.7
Paving	1.7	13.0	15.2	0.0	0.8	0.7
Architectural Coating	49.9	1.6	3.3	0.0	0.5	0.2
2020-2021						
Maximum Daily Emissions	**49.9**	**42.5**	**26.2**	**0.1**	**9.4**	**5.9**
SCAQMD Significance Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
VOC = volatile organic compound; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X =sulfur oxides;
PM_{10} = particulate matter with aerodynamic diameter less than 10 microns;
$PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns
[1] Assumes compliance with SCAQMD Rule 403.
Source of emissions: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).
Source of thresholds: SCAQMD 2015.

As shown in Table 3.1-12, the project's regional daily construction emissions would not exceed any of SCAQMD's thresholds of significance. Therefore, the short-term construction emissions would not violate or contribute substantially to an existing or projected air quality violation. The impact would be less than significant.

Operational Regional Emissions

Following construction of the project, long-term operational emissions would be generated, resulting from the day-to-day operations. Operational emissions for land use development projects are typically distinguished as mobile-, area-, and energy-source emissions. Mobile-source emissions are those associated with automobiles that would travel to and from the project site. Area-source emissions are those associated with natural gas combustion for space and water heating, landscape maintenance activities, and periodic architectural coatings. Energy-source emissions are those associated with electricity consumption and are more pertinent for GHG emissions than air quality pollutants. For detailed assumptions, methodologies, and models used to estimate emissions, please refer to Section 3.2.1, Methodology and/or Appendix B of this Draft Focused EIR.

Table 3.1-13 presents the project's maximum daily operational emissions between summer and winter seasons.

Table 3.1-13: Operational Regional Pollutants

Operational Activity	Regional Pollutant Emissions (pounds per day) [1]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	2.4	0.0	0.1	0.0	0.0	0.0
Energy	0.0	0.2	0.2	0.0	0.0	0.0
Mobile	2.8	20.5	34.2	0.1	11.2	3.1
Total Operational Emissions	**5.2**	**20.8**	**34.5**	**0.2**	**11.2**	**3.1**
SCAQMD Significance Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
VOC = volatile organic compound; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X =sulfur oxides;
PM_{10} = particulate matter with aerodynamic diameter less than 10 microns;
$PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns
[1] Emissions shown represent the maximum daily emissions from summer and winter seasons for each operational emission source and pollutant. Therefore, total daily operational emissions represent maximum daily emissions that could occur throughout the year.
Source of emissions: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).
Source of thresholds: SCAQMD 2015.

As shown in Table 3.1-13, the project's regional daily operational emissions would not exceed any of SCAQMD's thresholds of significance. Therefore, the long-term daily operational emissions would not violate or contribute substantially to an existing or projected air quality violation. The impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Cumulative Impacts

Impact AIR-3: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Impact Analysis

This impact is related to the cumulative effect of a project's regional criteria pollutant emissions. As described above, the region is currently nonattainment for ozone, PM_{10}, and $PM_{2.5}$. However, by its nature, air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region. The nonattainment status of regional pollutants is a result of past and present development within the air basin, and this regional impact is a cumulative impact. In other words, new development projects (such as the project) within the air basin would contribute to this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

The cumulative analysis focuses on whether a specific project would result in cumulatively considerable emissions. According to Section 15064(h)(4) of the CEQA Guidelines, the existence of significant cumulative impacts caused by other projects alone does not constitute substantial evidence that the project's incremental effects would be cumulatively considerable.

Rather, the determination of cumulative air quality impacts for construction and operational emissions is based on whether the project would result in regional emissions that exceed SCAQMD regional thresholds of significance for construction and operations on a project level. Projects that generate emissions below the SCAQMD significance thresholds would be considered consistent with regional air quality planning efforts and would not generate cumulatively considerable emissions.

Cumulative Construction Emissions

As shown above in Table 3.1-12, the project's maximum daily construction emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the project's construction emissions would not result in a cumulatively considerable incremental contribution to the existing cumulative air quality impacts. Furthermore, as described in Section 3.2.1, Methodology, and Table 3.1-8, all construction activities would comply with applicable SCAQMD rules and regulations, including Rule 403 to minimize fugitive PM dust emissions. Therefore, considering that the project's short-term construction emissions would not exceed any significance thresholds, the project would not result in a cumulatively considerable net increase of construction emissions. The cumulative impact from construction of the project would be less than significant.

Cumulative Operational Emissions

As shown above in Table 3.1-13, the project's maximum daily operational emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the project's operational emissions would not result in a cumulatively considerable incremental contribution to the existing cumulative

air quality impacts. Considering that the project's long-term operational emissions would not exceed any significance thresholds, the project would not result in a cumulatively considerable increase of operational emissions. The cumulative impact from long-term operation of the project would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Sensitive Receptors

Impact AIR-4:	**The project would expose sensitive receptors to substantial pollutant concentrations.**

Impact Analysis

This impact evaluates the potential for the project's construction and operational emissions to expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors are defined as those individuals who are sensitive to air pollution including children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities (SCAQMD 2009). Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours. However, when assessing the impact of pollutants with 1-hour or 8-hour standards (such as NO_2 and CO), commercial and/or industrial facilities would be considered sensitive receptors.

For the project, the closest sensitive receptors are single-family residences located approximately 12 meters (40 feet) southwest of the project site. This analysis evaluates the potential for construction- and operational-related criteria air pollutant, ozone precursor, and TAC emissions to impact sensitive receptors.

Localized Significance Threshold Analysis—Criteria Pollutants

The localized construction and operational analyses use thresholds (i.e., LSTs) that represent the maximum emissions for a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard (SCAQMD 2009). If the project's construction or operational emissions are under those thresholds, it follows that the project would not cause or contribute to an exceedance of the standard and would not expose sensitive receptors to substantial pollutant concentrations.

Localized Construction Analysis

As discussed in Section 3.2.1, Methodology, the LST Methodology only applies to on-site emissions and state "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only on-site emissions were compared with the applicable LSTs. As outlined in Section 5.1.1, Thresholds of Significance, the construction LSTs were obtained for a 5-acre project site located in SRA 23 with the nearest sensitive receptor being less than 25 meters away.

Table 3.1-14 presents the project's maximum daily on-site emissions compared with the applicable LSTs. Emissions estimates account for implementation of SCAQMD Rule 403, which is required for all projects regardless of significance.

Table 3.1-14: Comparison of Construction LSTs and Project Construction Emissions (Unmitigated)

Activity	Maximum On-site Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
2020				
Site Preparation	42.42	21.51	9.24	5.89
Grading	26.39	16.05	3.83	2.48
Building Construction—2020	19.19	16.85	1.12	1.05
2021				
Building Construction—2021	17.43	16.58	0.96	0.90
Paving	12.92	14.65	0.68	0.62
Architectural Coating	1.53	1.82	0.09	0.09
Maximum Daily Emissions	**42.42**	**21.51**	**9.24**	**5.89**
Construction Localized Significance Threshold	**270**	**1,577**	**13**	**8**
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes:
MF = Microfiltration
NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
Phases are assumed to not overlap; therefore, the maximum daily emissions are from the highest representative phase.
PM_{10} and $PM_{2.5}$ emissions are from the mitigated output to reflect compliance with SCAQMD Rule 403—Fugitive Dust.
Source of emissions: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).
Source of thresholds: SCAQMD 2009, for SRA 23, 25 meters, 5-acre site.

As shown in Table 3.1-14, the project's maximum daily on-site emissions would not exceed any of the applicable SCAQMD LSTs. Therefore, the project's construction activities would not cause or contribute substantially to an existing or future ambient air quality standard violation. Accordingly, the project's construction-related criteria air pollutant and ozone precursor concentrations would

not expose sensitive receptors to substantial pollutant concentrations. The impact would be less than significant.

Localized Operational Analysis

Similar to the construction LST analysis above, the applicable operational LSTs were obtained for a project located in SRA 23, a 5-acre project site, and the nearest sensitive receptor being less than 25 meters away.

As described above, the LST Methodology recommends that only on-site emissions are evaluated using LSTs. Because a majority of the project's mobile-source emissions would occur on the local and regional roadway network away from the project, only the on-site area-, energy-, and mobile-source emissions were included in this analysis. One twenty-fifth of the CalEEMod calculated mobile source emissions was used to account for on-site emissions from mobile sources, which accounts for vehicle emissions that occur within approximately 0.5 mile of the project site, and was included to provide for a worst-case analysis. Table 3.1-15 presents the project's maximum daily on-site emissions compared with the applicable LSTs.

Table 3.1-15: Comparison of Operational LSTs and On-site Project Operational Emissions (Unmitigated)

Operational Activity	On-site Emissions (pounds per day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	<0.01	0.11	<0.01	<0.01
Energy	0.24	0.20	0.02	0.02
Mobile	0.82	1.37	0.45	0.12
Maximum On-site Daily Emissions	**1.06**	**1.67**	**0.47**	**0.14**
Operations Localized Significance Threshold	**270**	**1,577**	**4**	**2**
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes:
NO_X= nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
Unmitigated results were used to calculate totals.
[1] Emissions shown represent the maximum daily emissions from summer and winter seasons for each operational emission source and pollutant. Therefore, total daily operational emissions represent maximum daily emissions that could occur throughout the year.
Source of emissions: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).
Source of thresholds: SCAQMD 2009, for SRA 23, 25 meters, 5-acre site.

As shown in Table 3.1-15, the project's maximum daily on-site operational emissions would not exceed any of the applicable SCAQMD LSTs. Therefore, the project's operational activities would not cause or contribute substantially to an existing or future ambient air quality standard violation. Accordingly, the project's operational criteria air pollutant and ozone precursor concentrations

would not expose sensitive receptors to substantial pollutant concentrations. The impact would be less than significant.

Toxic Air Pollutants—On-site Workers

A variety of State and national programs protect workers from safety hazards, including high air pollutant concentrations (California OSHA and CDC 2012).

On-site workers are not required to be addressed through this health risk assessment process. A document published by the California Air Pollution Control Officers Association (CAPCOA 2009), Health Risk Assessments for Proposed Land Use Projects, indicates that on-site receptors are included in risk assessments if they are persons not employed by the project. Persons not employed by the project would not remain on-site for any significant period. Therefore, a health risk assessment for on-site workers is not required or recommended.

Toxic Air Pollutants—Construction

DPM has been identified by the ARB as a carcinogenic substance. Major sources of DPM include off-road construction equipment and heavy-duty delivery truck activities. A health risk assessment (HRA) was prepared to determine if construction of the project would result in an exceedance of the applicable health risk thresholds. Detailed assumptions of the construction HRA are included in Appendix B. For purposes of this analysis, DPM is represented as exhaust emissions of PM_{10}.

The results of the HRA prepared for project construction, for cancer risk and long-term chronic cancer risk, are summarized below. Air dispersion modeling was utilized to assess the project's potential health risks using the current version of the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD version 18081) air dispersion model, which is the air dispersion model accepted by the EPA and the SCAQMD for preparing HRAs. Exhaust emissions of DPM were estimated using CalEEMod (version 2016.3.2), consistent with the assumptions detailed in Section 3.2.1, Methodology and Appendix B of this Focused EIR. Table 3.1-16 summarizes the emission rates of PM_{10} during unmitigated construction and PM_{10} with Tier IV Interim mitigated construction.

Table 3.1-16: Project DPM Construction Emissions—Unmitigated and Tier IV Interim Mitigation

Year	On-site DPM—Area 1 (grams/m^2/sec)	Off-site DPM—Segment 1 (grams/sec)
Annual Construction Emissions—Unmitigated		
2020	4.656E-07	7.380E-05
2021	3.090E-07	2.602E-05
Annual Construction Emissions—Tier IV Interim Mitigation		
2020	4.270E-08	7.380E-05
2021	3.348E-08	2.602E-05
Source: CalEEMod Output and Construction HRA Calculations (see Appendix A and Appendix B of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).		

The estimated health and hazard impacts at the maximum impacted sensitive receptor from the project's unmitigated construction emissions are provided in Table 3.1-17.

Table 3.1-17: Estimated Health Risks and Hazards: Project Construction—Unmitigated

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[1]
Risks and Hazards at the Maximum Impacted Sensitive Receptor: Infants[2]	22.9	0.03
Risks and Hazards at the Maximum Impacted Sensitive Receptor: Child[2]	2.6	0.03
Risks and Hazards at the Maximum Impacted Sensitive Receptor: Adult[2]	0.4	0.03
Significance Threshold	**10**	**1**
Exceeds Individual Source Threshold?	**Yes**	**No**

Notes:
[1] Chronic non-cancer hazard index was estimated by dividing the maximum annual DPM concentration (as PM_{10} exhaust) by the REL of 5 $\mu g/m^3$.
[2] The maximum impacted sensitive receptor for the infant, child, and adult scenarios is an existing single-family home located south of the southeastern border of the project site, off Lincoln Avenue.
Source: AERMOD and FCS 2018 (see Appendix B of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).

The sensitive receptor that has the highest cancer risks during the infant, child, and adult scenarios is an existing single-family home located south of the southeastern border of the project site, off Lincoln Avenue. As noted in Table 3.1-17, the project's construction DPM emissions would not exceed the non-cancer hazard index significance threshold; however, the project's construction DPM emissions would exceed the cancer risk significance threshold prior to the application of mitigation. Therefore, the project is required to implement Mitigation Measure (MM) AIR-4. Table 3.1-18, below, summarizes the health and hazard impacts at the maximum impacted sensitive receptor from construction of the project after the implementation of MM AIR-4, which would require the use of off-road construction equipment that meet emissions standards for Tier IV Interim engines.

Table 3.1-18: Estimated Health Risks and Hazards—Project Construction-with Tier IV Interim Mitigation

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[1]
Risks and Hazards at the Maximum Impacted Sensitive Receptor: Infants[2]	2.3	0.003
Risks and Hazards at the Maximum Impacted Sensitive Receptor: Child[2]	0.3	0.003
Risks and Hazards at the Maximum Impacted Sensitive Receptor: Adult[2]	<0.1	0.003

Table 3.1-18 (cont.): Estimated Health Risks and Hazards—Project Construction-with Tier IV Interim Mitigation

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[1]
Significance Threshold	**10**	**1**
Exceeds Individual Source Threshold?	**No**	**No**

Notes:
[1] Chronic non-cancer hazard index was estimated by dividing the maximum annual DPM concentration (as PM_{10} exhaust) by the REL of 5 µg/m^3.
[2] The maximum impacted sensitive receptor for the infant, child, and adult scenarios is an existing single-family home located south of the southeastern border of the project site, off Lincoln Avenue.
Source: AERMOD and FCS 2018 (see Appendix B of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).

As noted in Table 3.1-18, construction of the project would not exceed the cancer risk and non-cancer hazard index significance thresholds with mitigation. Therefore, the project would not result in a significant impact on nearby sensitive receptors from toxic air contaminants during construction after the implementation of MM AIR-4.

Toxic Air Pollutants—Operations

Common sources of TACs include high traffic freeways, distribution centers, large gas dispensing facilities, and dry cleaners. Operation of the project would not include those uses and therefore would not emit TACs.

As a proposed elementary school project, the future students and staff of the project are considered sensitive receptors. The ARB Air Quality and Land Use Handbook contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution" (ARB 2005), including recommendations for distances between sensitive receptors and certain land uses. These recommendations are assessed as follows.

- **Heavily traveled roads.** The ARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from the roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. The project is located approximately 2,280 feet from State Route 91 (SR-91), well beyond the recommended 500-foot distance from a major roadway.
- **Distribution centers.** The ARB also recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The closest distribution center is located approximately 2.9 miles northeast of the project site, which is more than 1,000 feet from the project.
- **Fueling stations.** The ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). A

50-foot separation is recommended for typical gas dispensing facilities. The nearest gas station is approximately 2,680 feet northwest of the project site.

Dry cleaning operations. The ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. The nearest dry cleaning facility is located approximately 4,480 feet northeast of the project site. In addition to those listed above, there are no other major sources of TACs located within 1,000 feet of the project site. The next closest major source not listed above is an existing rail line, located approximately 1,440 feet northwest of the project site.

Carbon Monoxide Hotspot Analysis

Project trips would contribute to vehicle volumes at existing and future local intersections. Local mobile-source CO emissions and concentrations near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. However, under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels with respect to local sensitive land uses, such as residential units, hospitals, schools, and childcare facilities.

With the turnover of older vehicles, introduction of cleaner fuels and implementation of more stringent emissions control technology, CO concentrations in the SCAQMD have steadily declined. As described in Table 3.1-3, CO is not a pollutant of concern in the region and all air monitoring stations in the SoCAB have discontinued monitoring for this pollutant in the last 3 years.

Nevertheless, as part of the demonstration of CO attainment for the SoCAB (2003 Air Quality Management Plan and 1992 Federal Attainment Plan for Carbon Monoxide), SCAQMD evaluated potential CO exceedance throughout the air basin. As discussed in the 1992 CO Plan, peak CO concentrations in the SoCAB are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. In the 1992 CO Plan, SCAQMD performed a CO hotspot analysis for the four busiest intersections in Los Angeles at the peak morning and afternoon time periods. The busiest intersection (Wilshire Boulevard and Veteran Avenue), which had traffic volumes of approximately 100,000 vehicles per day, was determined not to generate a CO hotspot even at peak morning and afternoon conditions. Thus, intersections with fewer than 100,000 vehicles per day would also not be anticipated to result in a CO hotspot.

LLG prepared a traffic impact analysis (TIA) for this project in 2018. The TIA identified the peak-hour traffic volumes for several intersections affected by the project. As identified in the TIA, the maximum peak-hour intersection volume would occur at the intersection of Madison Street and Indiana Avenue during PM peak-hours. The estimated cumulative traffic volume at this intersection is 2,730 PM peak-hour trips. Using a conservative factor of 10 to calculate daily vehicles, this maximally impacted intersection would service approximately 27,300 vehicles per day, which is substantially less than the 100,000 vehicles determined in SCAQMD's CO hotspot analysis.

Furthermore, this peak-hourly intersection traffic volume would be less than other air district CO hotspot screening values such as those of the Bay Area Air Quality Management District (44,000 vehicles per hour) and the Sacramento Metropolitan Air Quality Management District (31,600 vehicles per hour). Therefore, the project plus cumulative traffic would not contribute a substantial amount of traffic to existing or future intersections that could result in a CO hotspot. Therefore, the operational CO impact would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-4 During construction activities, all off-road equipment with engines greater than 50 horsepower shall meet either EPA or ARB Tier IV Interim off-road emission standards. The construction contractor shall maintain records concerning its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information may include but are not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number.

If engines that comply with Tier IV Interim off-road emission standards are not commercially available, then the construction contractor shall use the next cleanest piece of off-road equipment (e.g., Tier III) available. For purposes of this mitigation measure, “commercially available” shall mean the availability of Tier IV Interim engines taking into consideration factors such as critical-path timing of construction; and geographic proximity to the project site of equipment. The contractor can maintain records for equipment that is not commercial available by providing letters from at least two rental companies for each piece of off-road equipment where the Tier IV Interim engine is not available.

Level of Significance After Mitigation

Less than significant impact.

Objectionable Odors

Impact AIR-5: The project would not create objectionable odors affecting a substantial number of people.

Impact Analysis

Odors can cause a variety of responses. The impact of an odor is dependent on interacting factors such as frequency (how often), intensity (strength), duration (in time), offensiveness (unpleasantness), location, and sensory perception. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Odor-related symptoms reported in a number of studies include nervousness, headache, sleeplessness, fatigue, dizziness, nausea, loss of

appetite, stomach ache, sinus congestion, eye irritation, nose irritation, runny nose, sore throat, cough, and asthma exacerbation (SCAQMD 2007).

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations (SCAQMD 2007). The SCAQMD's resolution activity for odor compliance is mandated under California Health & Safety Code Section 41700, and falls under SCAQMD Rule 402. This rule on Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

The SCAQMD does not provide a suggested screening distance for a variety of odor-generating land uses and operations. However, the San Joaquin Valley Air Pollution Control District (Valley Air District) does have a screening distance for odor sources. Those distances are used as a guide to assess whether nearby facilities could be sources of significant odors. Projects that would site a new receptor farther than the applicable screening distances from an existing odor source would not likely to have a significant impact. These screening distances by type of odor generator are listed in Table 3.1-19.

Table 3.1-19: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: Valley Air District 2015.	

Construction-related Odors

Potential sources that may emit odors during construction activities include exhaust from diesel construction equipment. However, because of the temporary nature of these emissions, the

intermittent nature of construction activities, and the highly diffusive properties of DPM exhaust, nearby receptors would not be affected by diesel exhaust odors associated with project construction. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site. The project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. As such, construction odor impacts would be less than significant.

Operational-related Odors

The project would develop a new elementary school and is not expected to produce any offensive odors that would result in odor complaints. Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. Minor sources of odors, such as exhaust from mobile sources, are not typically associated with numerous odor complaints, but are known to have temporary and less concentrated odors. During long-term operation of the project, odors would primarily consist of passenger vehicles traveling to and from the site. These occurrences would not produce objectionable odors affecting a substantial number of people; therefore, operational impacts associated with the project's potential to create odors would be less than significant.

The Project as a Sensitive Receptor

As a proposed new elementary school, the project has the potential to place sensitive receptors near existing or planned sources of odor. The project site is not located within 2 miles of wastewater treatment facility or a petroleum refinery; however, five auto body shops that engage in painting/coating operations are located within 1 mile of the project site. There are no other major odor generating sources (as listed in Table 3.1-19) within screening distance of the site. Public record requests were filed with the SCAQMD to obtain the most recent odor compliant history for the potential odor generators within the vicinity of the project site. Based on the responses from the SCAQMD Public Records Section, none of the potential sources of odor creates odors affecting a substantial number of people. Therefore, the uses in the vicinity of the project would not cause substantial odor impacts to the project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.2 - Biological Resources

3.2.1 - Introduction

This section describes the existing biological setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on a site reconnaissance performed by FirstCarbon Solutions (FCS) Biologist, Robert Carroll, on August 8, 2018, as part of the Biological Resources Assessment (BRA) produced by FCS (Appendix C). Further desktop analysis involved multiple online database searches.

3.2.2 - Environmental Setting

The project area is mostly undeveloped and consists of a square-shaped parcel totaling 9.8 acres. The project site is currently a vacant lot located in a relatively flat area that slopes gently to the northwest, with no existing buildings or structures. The southern portion of the project site was formerly partially occupied by the KPRO 1570 AM transmitter building and antenna system, which have since been demolished. According to historical aerial photographic research, the site was first developed as an AM radio station in the late 1960s. Prior to its use as a radio station, the site was used for agricultural purposes.

Surrounding land uses include the Church of Christ to the east, residential uses to the west and south, and a baseball field and community center to the north of the project site. Adjoining properties include single-family residential development to the west and south, a grass field and the SSgt. Salvador J. Lara Casa Blanca Public Library to the west, Lincoln Avenue Church of Christ and various government buildings to the east, and Villegas Park on the north and northeast of the site.

No undisturbed habitat or natural lands exist within the site nor within the immediately surrounding parcels. The project site contains ruderal vegetation and ornamental tree species and is dominated by non-native species of plants and wildlife.

Soils

The United States Department of Agriculture (USDA) Natural Resources Conservation Service indicates that the soils on the site consist of Arlington fine sandy loam (55.1 percent) and Buren fine sandy loam (44.9 percent) (Exhibit 3.2-1).

- Arlington fine sandy loam is well drained, usually displayed as deep soils over a weakly cemented layer, and formed on alluvial fans and terraces in alluvium dominantly from granitic rocks. It has slow permeability and runoff, and has a slightly acidic to mildly alkaline surface.
- Buren fine sandy loam is moderately well drained, derived mostly from basic igneous rocks and has slow permeability. It has a slightly acidic to moderately alkaline surface and moderate water erosion hazard.

Vegetation Types

Ruderal/Disturbed Land

Disturbed land is classified as areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continues to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old home-sites.

Vegetation within the project site consists of Russian thistle (*Salsola tragus*), tumbleweed (*Amaranthus albus),* wild oat *(Avena fatua*), and foxtail barley (*Hordeum leporinum).*

Wildlife

The previously disturbed nature of the site in addition to the high level of traffic and development surrounding the project site allow for a limited number of wildlife species to occur. The majority of wildlife species that can tolerate disturbed and fragmented habitat conditions are generally invasive species and non-native species. The vegetation community and land cover types discussed above provide habitat for numerous local wildlife species adapted to urban conditions. Wildlife activity was low during the field survey and consisted exclusively of avian species. Avian species observed were the American crow (*Corvus brachyrhynchos*) and house sparrow (*Passer domesticus*).

Special-Status Species

Special-status species are plant and animal species that have been afforded special recognition by federal, State, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under the California Endangered Species Act (CESA) or the Federal Endangered Species Act (FESA);
- Protected under other regulations (e.g., the Migratory Bird Treaty Act [MBTA]);
- California Department of Fish and Wildlife (CDFW) Species of Special Concern;
- Plant species ranked by the California Native Plant Society (CNPS); or
- Receive consideration during environmental review under the California Environmental Quality Act (CEQA).

Source: ESRI Aerial Imagery. Riverside County Parcel Data. USDA Soils Data, Western Riverside Area Soils.

FIRSTCARBON SOLUTIONS™

200 100 0 200 Feet

Exhibit 3.2-1
Soils Map

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Special-Status Plants

Special-status plant communities are considered sensitive biological resources when federal, state, or local laws regulate their development, limited distributions, and habitat requirements of special-status plant or wildlife species that occur within them.

The Special-Status Plant Species Table 1 within the BRA Appendix A.1 identifies 11 special status plant species and CNPS sensitive species that have been recorded to occur within the Riverside West, California topographic quadrangle (United States Geological Survey [USGS] 1986), as recorded by the California Natural Diversity Database (CNDDB) and California Native Plant Society's Electronic Inventory (CNPSEI) databases (CDFW 2018; CNPS 2018). The table also includes the species' status, required habitat, and potential to occur within the project site. Based on field observations by an FCS biologist in conjunction with the habitat quality, vegetation, and soils present on-site, FCS was able to conclude that all special-status plant species have been determined unlikely to occur on-site and have a very low potential to occur in the future. All 11 special-status plant species have been included in the table, in order to justify their exclusion from further discussion.

Special-Status Wildlife

The Special-Status Wildlife Species Table 1 within the BRA Appendix A.2 identifies 23 federal and State listed threatened and/or endangered wildlife species, and State Species of Special Concern that have been recorded in the CNDDB (CDFW 2018) as occurring within Riverside West, California topographic quadrangle (USGS 1986). The table also includes the species' status, required habitat, and potential to occur within the project site. Of the 23 species listed in the special-status species table, four have the potential, albeit low, to occur on-site based on habitat characteristics. This was determined based on the FCS's field visit and further desktop level analysis. These species include the burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), greater western mastiff bat (*Eumops perotis californicus*), and the western yellow bat (*Lasiurus xanthinus*).

Mammals

Western mastiff bat

The western mastiff bat is a California State Species of Special Concern. It prefers open, semi-arid to arid habitats, such as woodlands and grasslands. Specifically, it roosts in crevices and shallow caves of cliff faces, buildings, trees, and tunnels. The trees present on the project site offer marginal roosting habitat and as such, the species has a low potential to occur within or adjacent to the project boundaries.

Western yellow bat

The western yellow bat is a California State Species of Special Concern. It is found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. It prefers to roosts in trees, particularly palms. Thus, the several ornamental palm trees on-site offer marginal roosting habitat and the species has a low potential to occur within or adjacent to the project boundaries.

Birds

Burrowing owl

The burrowing owl is a California State Species of Special Concern. The species was not found during FCS's field surveys, but there is a low potential for this species to occur on the project site. Marginal habitat (dry annual or perennial grasslands, characterized by low-growing vegetation) is currently present within the project site.

Swainson's Hawk

Swainson's hawk is federally protected under the MBTA as well as is listed a state threatened species. The species breeds in grasslands with scattered trees or on ranch lands with groves or lines of trees. It requires adjacent suitable foraging areas, such as grasslands or grain fields supporting rodent populations. This species has a low potential to occur within project boundaries due to the marginal foraging habitat present.

Jurisdictional Waters

An assessment of potentially jurisdictional features was conducted as part of the literature review and reconnaissance-level survey for the project site. The project site does not contain any wetlands or other areas designated as waters of the United States and no further studies or regulatory permitting would be required.

3.2.3 - Regulatory Framework

Federal

Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA § 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] § 17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR § 17.3). Actions that result in take can result in civil or criminal penalties.

FESA and Clean Water Act (CWA) Section 404 guidelines prohibit the issuance of wetland permits for projects that jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species. The United States Army Corps of Engineers (USACE) must consult with the United States Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service when threatened or endangered species under their

jurisdiction may be affected by a project. In the context of the project, FESA would be initiated if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of State and federal laws. The federal MBTA prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior.

Clean Water Act

The USACE regulates discharge of dredge or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA). "Discharges of fill material" is defined as the addition of fill material into waters of the United States, including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 United States Code [USC] 1341) requires any applicant for a Federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the United States include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 CFR § 328.3(b)]. Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 CFR § 328.4(c)(1)]. The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 CFR § 328.3(e)].

State

California Endangered Species Act

The State of California enacted the CESA in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing CEQA documents. The purpose is to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code [FGC] § 2080). CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC § 2081).

California Department of Fish and Game Codes

Fully protected fish species are protected under Section 5515; fully protected amphibian and reptile species are protected under Section 5050; fully protected bird species are protected under Section 3511; and fully protected mammal species are protected under Section 4700. The California Fish and Game Code defines take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Except for take related to scientific research, all take of fully protected species is prohibited. Section 3503 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and the destruction of raptor nests. Sections 2062 and 2067 define endangered and threatened species.

California Department of Fish and Wildlife Species of Special Concern

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFW and local lead agencies during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern," developed by the CDFW. It tracks species in California whose numbers, reproductive success, or habitat may be threatened. In addition to Species of Special Concern, the CDFW identifies animals that are tracked by the CNDDB, but warrant no federal interest and no legal protection. These species are identified as California Special Animals.

Porter-Cologne Water Quality Control Act

CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds except when the department has been notified pursuant to Section 1601." Additionally, CDFW may assert jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over 4 inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they

may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

Section 13260(a) of the Porter-Cologne Water Quality Control Act (contained in the California Water Code) requires any person discharging waste or proposing to discharge waste, other than to a community sewer system, within any region that could affect the quality of the waters of the State (all surface and subsurface waters) to file a report of waste discharge. The discharge of dredged or fill material may constitute a discharge of waste that could affect the quality of waters of the State. All of the wetlands and waterways in the project site are waters of the State, which are protected under this Act.

Historically, California relied on its authority under Section 401 of the CWA to regulate discharges of dredged or fill material to California waters. That section requires an applicant to obtain "water quality certification" from the State Water Resources Control Board (SWRCB) through its Regional Water Quality Control Boards (RWQCB) to ensure compliance with State water quality standards before certain federal licenses or permits may be issued. The permits subject to Section 401 include permits for the discharge of dredged or fill materials (CWA § 404 permits) issued by the USACE. Waste discharge requirements under the Porter-Cologne Water Quality Control Act were typically waived for projects that required certification. With the recent changes that limited the jurisdiction of wetlands under the CWA, the SWRCB has needed to rely on the report of waste discharge process.

California Native Plant Society

The CNPS maintains a rank of plant species native to California that has low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS ranks:

- **Rank 1A:** Plants presumed Extinct in California
- **Rank 1B:** Plants Rare, Threatened, or Endangered in California and elsewhere
- **Rank 2:** Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- **Rank 3:** Plants about which we need more information—A Review List
- **Rank 4:** Plants of limited distribution—A Watch List

All plants appearing on CNPS List 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA.

Local

Habitat Conservation Plan

The project site falls within the boundaries of the Rough Step 1 for the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). Project development would be consistent with the policies set forth in the MSHCP.

City of Riverside General Plan 2025 and the City of Riverside Municipal Code

If deemed applicable, the project will be required to comply with various Riverside Municipal Code Sections. These sections include:

- Section 16.72.040 establishing the MSHCP mitigation fee.
- Section 16.40.040 establishing the Threatened and Endangered Species Fees.
- Section 16.72.040 assisting in the maintenance of biological diversity and protect sensitive communities while encouraging economic development within the City of Riverside.
- Section 16.40.040 providing funding for the preservation of threatened or endangered species within the City of Riverside.

Additionally the project will have to abide by the goals of the City of Riverside General Plan 2025 Open Space and Conservation Element Objective. These include:

- **Policy OS-1.1:** Protect and preserve open space and natural habitat wherever possible.
- **Policy OS-5.2:** Continue to participate in the MSHCP Program and ensure all projects comply with applicable requirements.
- **Policy OS-5.4:** Protect native plant communities in the General Plan Area, including sage scrub, riparian areas and vernal pools, consistent with the MSHCP.
- **Policy OS-6.1:** Protect and enhance known wildlife migratory corridors and create new corridors as feasible.

3.2.4 - Methodology

Descriptions and analysis in this section are based on a site reconnaissance performed by FCS Biologist, Robert Carroll, a Biological Resources Assessment and Initial Study/Mitigated Negative Declaration completed by FCS Biologists, as well as several online database searches outlined below.

Field Survey

A field survey was conducted by FCS Biologist, Robert Carroll, on August 8, 2018, during daylight hours. The purpose of the survey was to ascertain general site conditions and identify any potentially suitable habitat areas for various special-status plant and wildlife species. Special-status or unusual biological resources identified during the literature review were field verified during the reconnaissance-level survey. Special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

Vegetation

Common plant species observed during the reconnaissance-level survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Uncommon and less familiar plants were identified off-site with the use of taxonomical guides, such as Clarke, et al. (2007), Hitchcock (1971), McAuley (1996), and Munz (1974). Taxonomic nomenclature used in this study follows Baldwin, et al. (2012). Common plant names, when not available from Baldwin, et al.

(2012), were taken from other regionally specific references. Vegetation types and boundaries were noted on aerial photos and through field observation, and digitized using ESRI ArcGIS software® ArcMap 10.0. Habitat types were based on the classification system from *A Guide to Wildlife Habitats of California* (CDFW 1988). Vegetation community and land cover types used to help classify habitat types are based on Holland (1986), Oberbauer (1996), and cross-referenced with CDFWs Natural Communities List (2010).

Wildlife

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded in a field notebook. Notations were made regarding suitable habitat for those special-status species determined to potentially occur within the project site (CDFW 2018). Appropriate field guides were used to assist with species identification during surveys, such as Peterson (2010), Reid (2006), and Stebbins (2003).

Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Urbanization and the resulting fragmentation of open space areas create isolated “islands” of wildlife habitat, forming separated populations. Corridors act as an effective link between populations.

The project site was evaluated for evidence of a wildlife movement corridor during the reconnaissance-level survey. However, the scope of the biological resources study did not include a formal wildlife movement corridor study utilizing track plates, camera stations, scent stations, or snares. Therefore, the focus of this study was to determine if the change of current land use of the project site may have significant impacts on the regional movement of wildlife. These conclusions are made based on the information compiled during the literature review, including: aerial photographs, USGS topographic maps and resource maps for the vicinity, the field survey conducted, and professional knowledge of desired topography and resource requirements for wildlife potentially utilizing the project site and vicinity.

Existing Documentation

As part of the literature review, an FCS biologist examined existing environmental documentation for the project site and local vicinity. This documentation included biological studies for the area; literature pertaining to habitat requirements of special-status species potentially occurring in the vicinity of the site; federal register listings, protocols, and species data provided by the USFWS and CDFW.

3.2.5 - Topographic Maps and Aerial Photographs

An FCS biologist reviewed current USGS 7.5-minute topographic quadrangle map(s) and aerial photographs as a preliminary analysis of the existing conditions within the project site and immediate vicinity. Information obtained from the review of the topographic maps included elevation range, general watershed information, and potential drainage feature locations (USGS 1986). Aerial photographs provide a perspective of the most current site conditions relative to on-site and off-site land use, plant community locations, and potential locations of wildlife movement corridors.

3.2.6 - Soil Surveys

The USDA has published soil surveys that describe the soil series (i.e., group of soils with similar profiles) occurring within a particular area (USDA 1980). These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information regarding soil characteristics. Many special-status plant species have a limited distribution based exclusively on soil type. Therefore, pertinent USDA soil survey maps were reviewed to determine the existing soil mapping units within the project site and to establish if soil conditions on-site are suitable for any special-status plant species (Soil Survey Staff 2018).

3.2.7 - Special-Status Species Database Search

An FCS biologist compiled a list of threatened, endangered, and otherwise special-status species previously recorded within the general project vicinity. The list was based on a search of the CDFW California Natural Diversity Database (CNDDB; CDFW 2018, a special-status species and plant community account database, and the CNPSEI of Rare and Endangered Vascular Plants of California database (CNPS 2018) for the Riverside West California USGS 7.5-minute topographic quadrangle map.

The CNDDB Biogeographic Information and Observation System (BIOS 5; CDFW 2005) database was used to determine the distance between known recorded occurrences of special-status species and the project site.

3.2.8 - Trees

Prior to conducting the reconnaissance-level survey, an FCS biologist reviewed any applicable City of Riverside and Riverside County ordinances pertaining to tree preservation and protective measures, and their tree replacement conditions or permits required. None of the ornamental trees on-site are protected under the County of Riverside tree ordinance and no further action is required.

3.2.9 - Jurisdictional Waters and Wetlands

Prior to conducting the reconnaissance-level survey, an FCS biologist reviewed USGS topographic maps and aerial photography to identify any potential natural drainage features and water bodies. In general, all surface drainage features identified as blue-line streams on USGS maps and linear patches of vegetation are expected to exhibit evidence of flows and considered potentially subject to State and federal regulatory authority as “waters of the United States and/or State.” A preliminary assessment was conducted to determine the location of any existing drainages and limits of project-related grading activities, to aid in determining if a formal delineation of waters of the United States or State is necessary.

3.2.10 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, biological resources impacts resulting from the implementation of the project would be considered significant if the project would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

3.2.4. Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Special-Status Species

Impact BIO-1:	**The project would potentially have a substantial adverse impact on special-status plant and wildlife species.**

Impact Analysis

An impact to special-status plant and wildlife species would be considered significant if project operations resulted in a substantial, adverse change in any of the physical conditions (such as habitat) within the area affected by the project and would therefore adversely affect a species. Each potential special-status species that has the potential to be impacted from project implementation is discussed in detail below.

Special-Status Plant Species

As discussed above, based on FCS's field survey, the additional documents completed by FCS, and the lack of suitable habitat and the high level of disturbance experienced at the site, no special-status plants are expected to occur on the site; therefore, the project is not expected to have substantial adverse impacts and no mitigation measures are recommended.

Special-Status Wildlife Species

Both the western mastiff bat and the western yellow bat have the potential to occur on site due to the suitable nesting habitat present in the ornamental trees surrounding and within the project site. Additionally, birds protected under the MBTA have the potential to occur within the project boundaries based on suitable nesting or foraging habitat that was found on site. Lastly, the open, grassland habitat provides marginal foraging habitat for Swainson's hawk and marginal nesting habitat for burrowing owls. As such, Mitigation Measure (MM) Bio-1, MM Bio-2, and MM Bio-3 would reduce all impacts to less than significant levels by requiring preconstruction surveys and implementation of appropriate measures, if protected species are found on site.

Level of Significance Before Mitigation

Potentially significant impacts.

Mitigation Measures

MM-BIO-1 Migratory and Nesting Birds

- Implementation of the following avoidance and minimization measures would avoid or minimize potential effects to migratory birds and habitat in and adjacent to the project site. These measures shall be implemented for construction work during the nesting season (February 15 through August 31):
  - If construction or tree removal is proposed during the breeding/nesting season for migratory birds (typically February 15 through August 31), a qualified biologist shall conduct pre-construction surveys for northern harrier, and other migratory birds within the construction area, including a 300-foot survey buffer, no more than 3 days prior to the start of ground disturbing activities in the construction area.
  - If an active nest is located during pre-construction surveys, USFWS and/or CDFW (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 300 feet around an active raptor nest and 50-foot radius around an active migratory bird nest) or alteration of the construction schedule.
  - A qualified biologist shall delineate the buffer using nest buffer signs, Environmentally Sensitive Area (ESA) fencing, pin flags, and or flagging tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently.

MM-BIO-2 Migratory and Nesting Bats

- If suitable roosting habitat for special-status bats will be affected by project construction (e.g., removal or buildings, modification of bridges), a qualified wildlife biologist will conduct surveys for special-status bats during the appropriate time of

day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (Anabat, etc.). Visual surveys will include trees within 0.25 mile of project construction activities. The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required.

- If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts.
- If roosts are determined to be present and must be removed, the bats will be excluded from the roosting site before the facility is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but cannot not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young).
- If roosts cannot be avoided or it is determined that construction activities may cause roost abandonment, such activities may not commence until permanent, elevated bat houses have been installed outside of, but near the construction area. Placement and height will be determined by a qualified wildlife biologist, but the height of the bat house will be at least 15 feet. Bat houses will be multi-chambered and will be purchased or constructed in accordance with CDFW standards. The number of bat houses required will be dependent upon the size and number of colonies found, but at least one bat house will be installed for each pair of bats (if occurring individually), or of sufficient number to accommodate each colony of bats to be relocated.

MM-BIO-3 Burrowing Owl Mitigation Measures

To minimize impacts and to adhere to the Western Riverside MSHCP mitigation requirements regarding burrowing owl, it is recommended that:

- No more than 30 days prior to the first ground-disturbing activities, the project Applicant shall retain a qualified biologist to conduct a preconstruction survey on the project site. The survey shall establish the presence or absence of western burrowing owl and/or habitat features, and evaluate use by owls in accordance with CDFW survey guidelines.
- On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership need not be surveyed. The survey shall take place near the sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls

shall be identified and mapped. During the breeding season (February 1–August 31), surveys shall document whether burrowing owls are nesting on or directly adjacent to disturbance areas. During the non-breeding season (September 1–January 31), surveys shall document whether burrowing owls are using habitat on or directly adjacent to any disturbance area. Survey results will be valid only for the season during which the survey is conducted.

- If burrowing owls are not discovered, further mitigation is not required. If burrowing owls are observed during the pre-construction surveys, the applicant shall perform the following measures to limit the impact on the burrowing owls:
  1. Avoidance shall include establishment of a 160-foot non-disturbance buffer zone. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation, or that the juveniles from the occupied burrows have fledged. During the non-breeding season (September 1-January 31), the project proponent shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a 160-foot non-disturbance buffer zone.
  2. If it is not possible to avoid occupied burrows, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent re-occupation. Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Additionally, the Western Riverside MSHCP has specific guidelines that will need to be followed if burrowing owls are found on site. They are as follows:

- A focused burrow survey that includes natural burrows or suitable man-made structures needs to be conducted as described below.
- A systematic survey for burrows including burrowing owl sign should be conducted by walking through suitable habitat over the entire survey area (i.e. the project site and within 150 meters). Pedestrian survey transects need to be spaced to allow 100 percent visual coverage of the ground surface.
- The distance between transect center lines should be no more than 30 meters (approximately 100 feet) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more qualified surveyors conduct concurrent surveys.
- The location of all suitable burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed should be recorded and mapped, including GPS

coordinates. If the survey area contains natural or man-made structures that could potentially support burrowing owls, or owls are observed during the burrow surveys, the systematic surveys should continue as prescribed in Part B. If no potential burrows are detected, no further surveys are required. A written report including photographs of the project site, location of burrowing owl habitat surveyed, location of transects, and burrow survey methods should be prepared. If the report indicates further surveys are not required, then the report should state the reason(s) why further focused burrowing owl surveys are not necessary.

- Focused Burrowing Owl Surveys will consist of site visits on four separate days. The first one may be conducted concurrent with the Focused Burrow Survey.
  1. Upon arrival at the survey area and prior to initiating the walking surveys, surveyors using binoculars and/or spotting scopes should scan all suitable habitat, location of mapped burrows, owl sign, and owls, including perch locations to ascertain owl presence. This is particularly important if access has not been granted for adjacent areas with suitable habitat.
  2. A survey for owls and owl sign should then be conducted by walking through suitable habitat over the entire project site and within the adjacent 150 m (approximately 500 feet). These “pedestrian surveys” should follow transects (i.e. Survey transects that are spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (approximately 100 feet.) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more qualified surveyors conduct concurrent surveys.) It is important to minimize disturbance near occupied burrows during all seasons.
  3. If access is not obtained, then the area adjacent to the project site shall also be surveyed using binoculars and/or spotting scopes to determine if owls are present in areas adjacent to project site. This 150-meter buffer zone is included to fully characterize the population. If the site is determined not to be occupied, no further surveys are required until 30 days prior to grading (see Pre-construction Surveys below).

After completion of appropriate surveys, a final report shall be submitted to the Riverside County Environmental Programs Department and the RCA Monitoring Program Administrator, which discusses the survey methodology, transect width, duration, conditions, and results of the survey. Appropriate maps showing burrow locations shall be included.

All project sites containing burrows or suitable habitat (based on Step I/Habitat Assessment) whether owls were found or not, require pre-construction surveys that shall be conducted within 30 days prior to ground disturbance to avoid direct take of burrowing owls (MSHCP Species-Specific Objective 6).

Level of Significance After Mitigation

Less than significant impact.

Sensitive Natural Communities or Riparian Habitat

Impact BIO-2:	**The project would not have adverse impacts on sensitive natural communities or riparian habitat.**

Impact Analysis

The project site is located in a highly urbanized area surrounded by a mix of residential and commercial development. The City's General Plan Open Space and Conservation Element does not designate the project site as riparian habitat. Furthermore, the project area contains vacant land that shows evidence of disturbance through past fill efforts. No riparian or sensitive habitats occur on the project site; therefore, the project is not expected to have substantial adverse impacts to riparian habitat or other sensitive natural communities. There are no sensitive natural communities present on the project site, including areas with riparian habitat, which would be considered sensitive under CEQA and no mitigation measures are required.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Wetlands and Jurisdictional Features

Impact BIO-3:	**The project would not have a substantial adverse effect on wetlands or jurisdictional features.**

Impact Analysis

As described in the environmental settings section of this document, the project site does not contain any wetlands that would be subject to regulation or protection. The project area is not located on federally protected wetlands and is designated as Residential/Urban/Exotic. No USACE, RWQCB, or CDFW jurisdictional areas are located on-site. The project is not anticipated to have direct or indirect impacts on federally protected wetlands as defined by Section 404 of the Clean Water Act and as such; impacts resulting from the project would be less than significant and no mitigation measures are required.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Fish and Wildlife Movement Corridors

Impact BIO-4:	**The project would not have substantial adverse impacts on fish or wildlife movement.**

Impact Analysis

The project site is mostly undeveloped and located in a primarily urban area surrounded by a mix of residential and commercial development. The site is highly disturbed and contains no wildlife movement corridors. The urban context of the project site coupled with the dense surrounding development precludes significant wildlife movement corridors. Based on this, impacts would be less than significant and no mitigation measures are required.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Local Policies or Ordinances

Impact BIO-5:	**The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Impact Analysis

There are several ornamental trees throughout the project site, both along the periphery of the project site and within the site. Species observed include a Mexican fan palm (*Washingtonia robusta*), Mediterranean cypress (*Cuperssus sempervirens*), pepper tree (*Schinus molle*), rose bushes (*Rosa spp.*), and a pomegranate tree (*Punica granatum*). None of the trees on-site are protected under the County of Riverside tree ordinance and will not require any additional mitigation measures. Therefore, the project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, by removing ornamental trees, and no mitigation is necessary. The potential impacts to protected wildlife species that may be nesting or roosting in these trees are discussed in Impact BIO-1 and will be mitigated to a less than significant level by implementing MM-BIO-1 through MM-BIO-3.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-1 through BIO-3.

Level of Significance After Mitigation

Less than significant impact.

Local, Regional, or State Habitat Conservation Plan

Impact BIO-6:	**The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.**

Impact Analysis

The project site falls within the boundaries of the Rough Step 1 for the 2004 Western Riverside MSHCP. The species protected under the Western Riverside MSHCP that have the potential to occur on site based on suitable habitat include the burrowing owl and Swainson's hawk. As such, the previously mentioned mitigation measures will be implemented if these species are found to be present on site. The fees regarding the project development will be calculated at a rate of $7,164 per acre.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-1 through BIO-3.

Level of Significance After Mitigation

Less than significant impact.

3.3 - Cultural and Tribal Cultural Resources

3.3.1 - Introduction

This section describes the existing cultural resources setting and potential effects from project implementation on the site and its surrounding area that are based on information contained in the following documents:

- City of Riverside General Plan 2025
- Phase I Cultural Resources Assessment prepared in August 2018 by FirstCarbon Solutions (FCS), included in this Draft Focused EIR as Appendix D.

3.3.2 - Environmental Setting

Overview

The term "cultural resources" encompasses historic, archaeological, and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- **Paleontological Resources:** Paleontology is the study of plant and animal fossils.
- **Burial Sites:** Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

Cultural Setting

Prehistory

Fagan (2003), Moratto (1984), and Chartkoff and Chartkoff (1984) provide recent overviews of California archaeology and historical reviews of the inland Southern California coast, among other locales. The most accepted regional chronology for coastal Southern California is from Wallace's four-part Horizon format (1955), which was later updated and revised by Warren (1968), and most recently by Chartkoff and Chartkoff (1984). The latter modified the term "Period" to "Horizon," a term more common among researchers today. Created to place temporal structure upon materialistic phases observed during archaeological syntheses, the advantages and weaknesses of Southern California chronological sequences are reviewed by Warren (in Moratto 1984), Chartkoff and Chartkoff (1984), and Heizer (ed. 1978).

Early Man

Spanning the period from approximately 17,000 to 9,500 before present (BP), archaeological assemblages attributed to the Early Man Period are characterized by large projectile points and

scrapers. The limited data available suggests that prehistoric populations focused on hunting and gathering, moving about the region in small nomadic groups. Technologies associated with ocean resource gathering would have likely been utilized, but the sea level during this Period was lower than today, meaning that sites on the coast are inundated and unavailable for study. Californians of this Period are viewed as populations of big game hunters that were mobile enough to pursue herds.

The entirety of California may have been occupied near the beginning of the Holocene epoch, about 11,750 years ago. During the Holocene, sea levels rose about 60 meters between 11,750 and 7,000 years BP, due to melting of the Pleistocene ice sheet in the higher latitudes. Although the sea level was about 120 meters lower off the coast of California roughly 22,000 years ago (Milne et al. 2005), sea level stabilization began about 7,000 years ago and only a slight rise has occurred since then. Pleistocene flora and fauna are regularly uncovered from sediments at the La Brea Tar Pits, deep construction-related excavations in coastal Orange County and in the Santa Ana watershed. Such studies reinforce the idea that much of Southern California exhibited a climate similar to that of Monterey or the San Francisco Bay area during this Period (Chartkoff and Chartkoff 1984), with slightly drier conditions away from the coast.

Millingstone

As part of the slow restabilization effect of the melting continental ice sheet, rising sea levels and other environmental changes up to the end of the Early Man Period, the Southern California climate became warmer and drier. Known as the Altithermal, Fagan (2003) notes that after 8,500 BP, the climate of most of California became warmer and much drier, and remained so for 4,000 years. Native groups altered their subsistence characteristics to compensate. Characterized by the appearance of handstones and millingstones that would have been used to grind seeds, the Millingstone Period tentatively dates to between 9,500 and 3,000 BP. Artifact assemblages in early Millingstone sites reflect an emphasis on foraging subsistence systems. Because shrubby vegetative communities replaced the temperate forest, native populations would likely have shifted to seasonal rounds to take advantage of new patterns of seed ripening. Little is known about the types of cultural changes that would be needed, but the types of artifacts seen during this Period can infer the subsistence systems.

Artifact assemblages typically included choppers and scraper planes, with a general lack of projectile points. Large projectile points began to appear in the late portion of the Millingstone Period, which suggests the development of a more diverse economy. The distribution of Millingstone sites reflects the theory that aboriginal groups may have followed a modified central-based wandering settlement pattern. In this semi-sedentary pattern, a base camp would have been occupied for a portion of the year, but small population groups seasonally occupied subsidiary camps in order to exploit resources not generally available near the base camp. Sedentism apparently increased in areas possessing an abundance of resources that were available for longer periods. Arid inland regions would have provided a more dispersed and sporadic resource base, further restricting sedentary occupations to locations near permanent water. The duration and intensity of encampment occupations increased, especially in the latter half of the Period in the coastal areas. Huge shellmounds near coastal habitats indicated more intensive sedentism after 5,000 BP (Fagan 2003), suggests an increase in population.

Intermediate

Dating between 3,000 and 1,250 BP, the Intermediate Period represents a transitional era. Excavated assemblages retain many attributes of the Millingstone Period but with more elaborate and diverse artifact types in these deposits. Additionally, Intermediate Period sites can contain large-stemmed or notched small projectile points suggestive of bow and arrow use, especially near the end of the Period, and the use of portable grinding tools continues. Intensive use of mortar and pestles signaled processing of acorns as the primary vegetative staple as opposed to a mixed diet of seeds and acorns. Because of a general lack of data, neither the settlement and subsistence systems nor the cultural evolution of this Period are well understood, but it is very likely that the nomadic ways continued. It has been proposed that sedentism increased with the exploitation of storable food resources, such as acorns, but coastal sites from the Period exhibit higher fishing activity than in previous periods. The first permanently occupied villages make their appearance (Chartkoff and Chartkoff 1984).

Late Prehistoric

Extending from 1,250 BP to Spanish Contact in 1769, the Late Prehistoric Period reflects a slight increase in technological sophistication and diversity. Exploitation of marine resources continued to intensify. Assemblages characteristically contain projectile points, and toward the end of the Period the size of the points decrease and notched and stemmed bases appear, which implies the use of the bow and arrow. Use of personal ornaments, such as shell beads, are widely distributed east of the coast suggesting well-organized and codified trade networks. Additional assemblages in this Period/Horizon included steatite bowls, asphaltum, grave goods, and elaborate shell ornaments. The use of bedrock milling stations was widespread during this Period/Horizon. Increased hunting efficiency and widespread exploitation of acorns provided reliable and storable food resources. Village size increased during this time, with some of these villages potentially having held 1,500 or more residents (Chartkoff and Chartkoff 1984). Analyses of skeletons show that the first signs of malnutrition appear in this Period, signaling greater competition for food resources (Fagan 2003).

The earliest part of this Period may have seen an incursion of Cupan-Takic speakers from the Great Basin country (the so-called “Shoshonean wedge” of Kroeber 1925), who may have replaced the Hokan speakers in the area. At the time of the Spanish conquest, Cupan-Takic speakers were located in Orange County, western Riverside County, and the Los Angeles Basin (Gabrieliño, Juaneño and Cahuilla peoples). Serran-Takic speakers are now represented by the Serranos in the San Bernardino Mountains. Recent work (O’Neil 2002) has concluded that the “Shoshonean wedge” is misnamed—the original Los Angeles inhabitants replaced by the incoming Takic-speakers may have actually been Yuman speakers (similar to those in the California Delta region of the Colorado River) and not Hokan Salinan-Seri (Chumash) speakers as was suggested by Kroeber.

At the time of the Spanish conquest, local Indian groups were composed of constantly moving and shifting clans and cultures. Early ethnographers applied the concept of territorial boundaries to local indigenous groups purely as a conceptualization device, and the data was based on fragmented information provided to them from second-hand sources.

Native American Background

Of four Native American groups encountered by the Spanish chroniclers in the inland portions of the Los Angeles basin, it is likely that the Serrano and the Luiseño may have been the groups that were using the area for resource gathering.

The Serrano

Kroeber (1925) and Bean and Smith (1978) form the primary historical references for this group. According to Bean and Smith (1978), the Project area lies near the southern portion of an area utilized by the Serrano. Spanish diseases decimated all indigenous groups adjacent to the eastern San Bernardino Mountains, especially after an outpost was built in Redlands in 1819, but some Serrano survived intact for many years in the far eastern San Bernardino Mountains, due to the ruggedness of the terrain and the dispersed population.

The Serrano spoke a language that belongs to the Cupan group of the Takic subfamily. As part of the larger Uto-Aztecan language family, the Takic subfamily includes the Shoshonean groups of the Great Basin. The total Serrano population at initial European contact was roughly 2,000 people. Their range is generally thought to have been located in and east of the Cajon Pass area of the San Bernardino Mountains, north of Yucaipa, west of Twentynine Palms, and south of Victorville. The range of this group was limited and restricted by reliable water. Twentynine Palms was the origin location of the Maringa Serrano clan, and after 1811, many Serrano were forcibly taken to the Mission San Gabriel (Bean and Vane 2002). Located in Joshua Tree National Park, the Mara Oasis was the central location for the Maringa Serrano clan.

Serrano populations studied in the early part of the last century were a remnant of their cultural form prior to contact with the Spanish missionaries. Nonetheless, the Serrano are viewed as clan and moiety-oriented, or a local lineage-oriented group tied to traditional territories or use-areas. The Serrano clans are considered a “non-political ethnic nationality,” divided amongst themselves into patrilineal clans with two moieties: Coyote and Wildcat. Typically, a “village” consisted of a collection of families centered about a ceremonial house, with individual families inhabiting willow-framed huts with tule thatching and a central fire pit. Considered hunter-gatherers, Serrano exhibited a sophisticated technology devoted to hunting small animals and gathering roots, tubers, and seeds of various kinds. Today, Serrano descendants are found mostly on the Morongo reservation.

Luiseño

Of all the Southern California native groups, the Luiseño have been the most ethnographically studied and the literature is rich in detail. The Luiseño occupational areas encompass over 1,500 square miles of Southern California (Bean and Shipek 1978; Kroeber 1925) as well as the Channel Islands (Sparkman 1908). Luiseño villages were found along the Pacific Ocean from just north of Agua Hedionda to south of Aliso Creek in present-day San Diego County. They then moved inland from these points to the western base of the San Jacinto River, and then south to the valley of San Jose, near Fallbrook (Bean and Shipek 1978). The villages were determined according to their proximity to a defined water source, access to a food-gathering locale, and whether they were in good defensive locations (Bean and Shipek 1978). Spatially, these villages were commonly located along valley bottoms, streams, or coastal strands. The Luiseño characteristically lived in sedentary

villages, therefore one clan or family occupied several food-gathering locations and aggressively guarded these areas against other clans (Bean and Shipek 1978; Sparkman 1908; Strong 1972).

Luiseño homes were constructed in two forms; one for larger construction and one for a smaller home style. The larger variations were typically constructed with forked posts supporting wood ceiling beams and were completely covered in thatch, which was lightly mixed with sand or soil (Bean 1978; Kroeber 1925). The smaller home style had a slightly conical roof made of some locally available brush with a floor that was usually excavated 2 feet below ground surface. All homes were built with a small fire pit in the center, and a slight smoke hole in the roof just above the fire (Bean 1978; Bean and Shipek 1978; Kroeber 1925). Sweat houses were of similar thatch design to that of the smaller home pattern, but varied in its construction in that it stood on two forked posts connected by log and was shaped like an ellipse with an entrance on one of the longer sides of the structure.

The pottery associated with the Luiseño is made for functionality; it was simply constructed and lacked ornamental design, although Bean and Shipek (1978) note that if designs were included, "a simple line decoration was either painted or incised with a fingernail or stick." The Luiseño made pots from the basis of a coil form, in which pieces of coiled clay are gradually added to the edge of the pot, while it is being shaped with a wooden paddle and finished with a polishing stone. After completion, the pot was sunbaked and fired (Sparkman 1908). Typical uses of pottery included cooking, water jugs, containers, and a water vessel with two spouts used while gathering food (Sparkman 1908). Plant fibers were also commonly used for purposeful household implements, such as brooms, brushes, nets, pouches twine, and cedar bark skirts for women. The process of creating such items from plant fiber tends to rely on soaking, stretching, and then rolling the fiber (Sparkman 1908; Bean and Shipek 1978).

Ceremony and ritual was of great importance to all native peoples, and the Luiseño had their own variety of traditional practices. Frequently practiced ceremonies included multiple rituals for the mourning of the dead, the eagle dance, separate ceremonies for the initiation of boys and girls, and a summer and winter solstice celebration (Kroeber 1925; Sparkman 1908; Strong 1972). These ceremonies offered gatherers an opportunity to witness reenactments, songs, and the oral recitation of their history (Garbarino and Sasso 1994). Important equipment during rituals included blades made of obsidian, stone bowls, clay figurines, and headdresses constructed of eagle-feathers (Bean and Shipek 1978). Ritual dances were limited to three standard dances such as the fire dance, which was used during the Toloache Cult initiation for boys at puberty. Also of great significance during the boys' initiation were masterfully designed sand paintings, once thought to have originated in the Southwest, though presently culturally identified with the Luiseño (Bean and Shipek 1978; Garbarino and Sasso 1994; Kroeber 1925). Although not necessarily limited to ritual, Heizer and Whipple (1971) comment that the Luiseño of Riverside County decorate their rock designs in the same form as that of the native peoples of the Great Basin, which appeared as pecked abstracts displayed on boulders.

Personal adornment was a common practice among the Luiseño. Ornamental items such as beads and pendants were made of clay, shell, stone, deer hooves, bear claws, and mica sheets. Men would wear ear and nose ornaments, sometimes made of bone or cane with beads attached. Body painting and tattooing was used purely for rituals (Bean and Shipek 1978).

Historic Background

The Spanish Period (1769–1821)

The first Europeans to traverse the territory that constitutes modern Riverside County were Spanish soldier, Pedro Fages, and Father Francisco Garcés. This expedition to locate deserting soldiers eventually brought the group through the foothills of the San Jacinto Mountains, along Coyote Canyon, on the southern edge of Riverside County. They then continued into the Anza Valley, the San Jacinto Valley, Riverside and eventually into San Bernardino and the Cajon Pass. Later, in 1774, Captain Juan Bautista de Anza would also utilize Coyote Canyon and enter the confines of modern Riverside County as his expedition searched for an overland route from Sonora to coastal Southern California. These expeditions sparked an influx of non-natives to Southern California, the Spanish being the first of these groups. Associated with the Spanish migration is the establishment of missions and military presidios along the coast of California. Although neither the missions nor presidios were ever located within the confines of modern Riverside County, their influence was far reaching. For example, land belonging to Mission San Gabriel extended to inland Southern California, east of the periphery of the Coachella Valley. Mission officials then converted portions of these holdings into ranchos during the Mexican period. Several ranchos were located in modern Riverside County and the Project area is located in the Jurupa Rancho.

The Mexican Period (1821–1848)

Administration of the Southern California ranchos shifted to Mexican hands about in 1824, but effective control did not occur until the early 1830s. Once the ranchos were secularized, the Mexican administrators began granting vast tracts of the original Mission properties to members of prominent families whom had helped cut ties from the Spanish system. In 1838, title to the Mission San Gabriel's outpost in this area, the Jurupa Rancho, was granted to Juan Bandini, the appointed administrator of the Mission San Gabriel. This land grant was the first officially recognized Mexican land grant within modern Riverside County. The Jurupa Rancho consisted of roughly 30,000 acres, bounded by the Jurupa Hills to the north, the Santa Ana River to the south and east, and the Chino Rancho to the west.

During the period of the Mexican ranchos, rancho owners were constantly harassed by thieves and native groups from the Mojave region. Groups whose intent was to steal horses and cattle often attacked the northern part of the Rancho San Bernardino, so that Juan Bandini donated the very northeastern portion of the Jurupa Rancho for resettlement in 1842. By 1843, Bandini further fragmented the Jurupa Rancho, selling a sizable portion to Benjamin D. Wilson, who then sold the property known as Jurupa (Rubidoux) Rancho to Louis Rubidoux in 1847. The Rancho would be further divided within the upcoming decade.

American Settlement Period (AD 1848 to 1885)

Although California shifted into American hands, organized development of the Jurupa area was slow to occur, and no town site development took place before 1893. During this period, the general Jurupa area is divided into three distinct portions. Rancho Jurupa was a 7-square-league grant made to Juan Bandini (died 1859) by California Governor Alvarado in 1838. In 1841, Abel Stearns married Bandini's daughter Arcadia: the mixed marriage was a common event at that time where the white

soon-to-be landowner married into the landholdings of the local and economically depressed *Californios*. As required by the Land Act of 1851, Juan Bandini filed a claim for the major portion of the grant in 1852, and this was confirmed by the United States District Court in 1855. A few years later Bandini sold a large portion of the Rancho Jurupa grant to Stearns, who then was able to patent the property in 1879. This then is the source of the Rancho Jurupa (Stearns) grant. In 1843, Bandini sold approximately 1.5 square leagues (6,750 acres) of the original Rancho Jurupa grant to Benjamin Wilson. A year later, Wilson sold this property to Isaac Williams, grantee of Rancho Santa Ana del Chino, and James (Santiago) Johnson. Williams and Johnson then sold the property to Louis Rubidoux in 1849, and it eventually became known as the Rubidoux Ranch. Rubidoux built a house on this land west of the Santa Ana that still stands today. Rubidoux was a large landholder at the time and had previously bought the Rancho San Jacinto y San Gorgonio from Johnson in 1845. Cornelius Jensen was a nearby landholder, having built his homestead on nearby lands. Both of these early pioneers used water from the Santa Ana and wells to irrigate their crops and vineyards. The Jensen homestead flooded out during the 500-year flood of the Santa Ana in 1862. After California became part of the United States, a claim for Rancho Jurupa was filed by Louis Rubidoux with the Public Land Commission in 1852, and the patent was at last received in 1876. The Jurupa area outside of the Rancho is then another entity. By the 1880s, people were beginning to populate and develop the homestead lands northwest of the Jensen and Rubidoux properties.

Once Americans began to homestead and buy land from the Mexican families, Archibald Patton and Arnold J. Stalder were the most notable landowners in this area, with Stalder obtaining nearly 8,000 acres from Southern Pacific. By 1886, the population in the Jurupa Rancho outlying areas had increased enough to warrant the creation of the Pleasant Valley School District. In 1888, the area became a separate voting district, named Union for the uniting of several different areas. These areas included the greater Chino and Cucamonga regions, containing the new towns of Etiwanda, Sansevain, and Bloomington, and other various scattered land portions north of the Jurupa Rancho line. After the turn of the century, place names such as Pedley, Wineville (Mira Loma), Glen Avon, and Rubidoux would come to designate specific locations.

Local History

Founded in 1870 by John North and a group of Easterners who wished to establish a colony dedicated to furthering education and culture, Riverside was built on land that was once a Spanish rancho. Investors from England and Canada transplanted traditions and activities adopted by prosperous citizens: the first golf course and polo field in Southern California were built in Riverside. The first orange trees were planted in 1871, but the citrus industry in Riverside began two years later when Eliza Tibbets received two Brazilian navel orange trees sent to her by a friend at the Department of Agriculture in Washington. The trees thrived in the Southern California climate and the navel orange industry grew rapidly.

Within a few years, the successful cultivation of the newly discovered navel orange led to a California Gold Rush of a different kind: the establishment of the citrus industry, which is commemorated in the landscapes and exhibits of the California Citrus State Historic Park and the restored packing houses in the Downtown Marketplace District. By 1882, there were more than half a million citrus

trees in California, almost half of which were in Riverside. The development of refrigerated railroad cars and innovative irrigation systems established Riverside as the wealthiest city per capita by 1895.

As the City prospered, a small guest hotel designed in the popular Mission Revival style grew to become the world famous Mission Inn, favored by presidents, royalty, and movie stars. Postcards of lush orange groves, swimming pools, and magnificent homes have attracted vacationers and entrepreneurs throughout the years. Many relocated to the warm, dry climate for reasons of health and to escape Eastern winters. Victoria Avenue with its landmark homes serves as a reminder of European investors who settled here.

Riverside's citizens are proud of the City's unique character born from a tradition of careful planning, from its carefully laid out historic Mile Square to its 1924 Civic Center designed by the same planner responsible for San Francisco's, Charles Cheney. Through the City's Office of Historic Preservation, it is committed to preserving the past as a firm foundation for the future. Over 100 City landmarks, 20 National Register Sites and two National Historical Landmarks have been designated by the City Council.

3.3.3 - Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the National Register of Historic Places (NRHP), which contains an inventory of the nation's significant prehistoric and historic properties. Under 36 Code of Federal Regulations 60, a property is recommended for possible inclusion on the NRHP if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

State

California Register of Historical Resources

As defined by Section 15064.5(a)(3)(A-D) of the California Environmental Quality Act (CEQA) Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (CRHR). The CRHR and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model, since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that meets the NRHP criteria is clearly significant. In addition, a resource that does not meet the NRHP standards may still be considered historically significant at a local or State level.

California Environmental Quality Act

The CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA guidelines direct lead agencies to evaluate archaeological sites to determine if they meet the criteria for listing in the CRHR. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the CRHR, potential adverse impacts to it must be considered. If an archaeological site is considered not to be an historical resource but meets the definition of a "unique archeological resource" as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

Local

Title 20 (Cultural Resources Code) of the Riverside Municipal Code

The Cultural Resources Ordinance is the primary body of local historic preservation laws. Title 20 established the authority for preservation, the composition and administrative requirements of the Cultural Heritage Board, criteria for evaluating projects affecting cultural resources, and procedures for protecting and designating significant cultural resources.

City approval is required to alter, demolish, or relocate historic resources. This process for preserving cultural resources is a major consideration in the City's planning and permitting actions.

City of Riverside General Plan Historic Conservation Element

The applicable policies listed below are from the City of Riverside General Plan 2025, and are intended to ensure the preservation of cultural, historical, archaeological, paleontological, geological, and educational resources in the City of Riverside.

- **Policy HP-1.3**: The City shall protect sites of archaeological and paleontological significance and ensure compliance with all applicable State and federal cultural resources protection and management laws in its planning and project review process.
- **Policy HP-2.1:** The City shall actively pursue a comprehensive program to document and preserve historic buildings, structures, districts, sites (including archaeological sites), objects, landscapes, and natural resources.
- **Policy HP-2.2:** The City shall continually update its identification and designation of cultural resources that are eligible for listing in local, State, and national registers based upon the 50-year age guidelines for potential historic designation eligibility.

- **Policy HP-2.3:** The City shall provide information to citizens, and the building community about what to do upon the discovery of archaeological resources and burial sites, as well as, the treatment, preservation, and repatriation of such resources.
- **Policy HP-4.1**: The City shall maintain an up-to-date database of cultural resources and use that database as a primary informational resource for protecting those resources.
- **Policy HP-4.3**: The City shall work with the appropriate tribe to identify and address, in a culturally appropriate manner, cultural resources and tribal sacred sites through the development review process.
- **Policy HP-7.4**: The City shall promote the preservation of cultural resources controlled by other governmental agencies, including those related to federal, State, county, school district, and other agencies

3.3.4 - Methodology

FCS contacted the Eastern Information Center (EIC) at the University of California, Riverside, and requested that it conduct a records search for the project area. The EIC is one of nine information centers that comprise the California Historical Resources Information Center. The EIC maintains site records and relevant documents regarding the cultural resources within Riverside County.

The Natural History Museum of Los Angeles (NHM) was requested to conduct a search of its records to determine the relative sensitivity of the project area for paleontological resources. The results of the search indicated that shallow excavations into older Quaternary alluvium were unlikely to yield significant fossil remains; however, deeper excavations could yield significant paleontological specimens.

On July 16, 2018, FCS sent a letter to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project area. The response from the NAHC was received July 25, 2018, and it noted that the records search was negative. A list of Native American tribal members affiliated with the project area who may have additional knowledge of the project area was included with the results. These tribal members were sent letters on July 30, 2018, asking for any additional information they might have concerning the project area. To date, six responses have been received and can be found in Appendix B of the PI CRA.

A radio station, consisting of four antennas, a small concrete broadcast building, and a paved parking lot, were constructed on the property in the late 1960s. These structures were observed during the Phase I CRA conducted in August 2018 by FCS. However, the entire facility was demolished, pursuant to City approval, as the result of a real estate transaction, precluding further evaluation.

3.3.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, cultural resources impacts resulting from the implementation of the project would be considered significant if the project would:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d) Disturb any human remains, including those interred outside of formal cemeteries?

Additionally, the following thresholds of significance apply to tribal cultural resources:

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
   - Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
   - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.3.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Historic Resources

Impact CUL-1:	**Subsurface construction activities associated with the project would potentially damage or destroy previously undiscovered historic resources.**

Impact Analysis

The site was previously occupied by the KPRO 1570 AM transmitter building and antenna system, which have since been demolished. According to historical aerial photographic research, the site was used as an AM radio station in the late 1960s and for agricultural purposes prior to its use as a radio station. The site was not recorded as a cultural resource as part of the study. However, there may be historic resources associated with the station in a sub-surface context. These resources could consist of buried trash deposits, plumbing and irrigation systems, or other historic period objects or structures from an earlier period and unrelated to the radio station. The measure listed below are recommended to address impacts related to undiscovered historic resources.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-1 If cultural resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology and Historic Preservation (National Park Service 1983) shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work such as data recovery excavation may be warranted by the archaeologist to exhaust the data potential of the resource.

Level of Significance After Mitigation

Less than significant impact.

Archaeological Resources

Impact CUL-2: Subsurface construction activities associated with the project would potentially damage or destroy previously undiscovered archaeological resources.

Impact Analysis

The records search, Native American scoping, and intensive pedestrian survey did not identify any previously recorded or unrecorded cultural resources within or adjacent to the project site. Given these results and the fact that the site has been previously disturbed, it is unlikely that the project would encounter previously unidentified cultural resources during project implementation. Measure CUL-1a listed above is recommended for unanticipated discoveries.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM CUL-1a.

Level of Significance After Mitigation

Less than significant impact.

Paleontological Resources

Impact CUL-3: Subsurface construction activities associated with the project would potentially damage or destroy previously undiscovered paleontological resources.

Impact Analysis

According to the thorough paleontological search conducted by the NHM, vertebrate fossil localities were not found to lie directly within the project area boundaries. However, localities were found somewhat nearby from sedimentary deposits similar to those that occur in the project area. Results of the search concluded that shallow excavations into older Quaternary alluvium were unlikely to yield

significant fossil remains; however, deeper excavations could yield significant paleontological specimens. Any substantial excavations in the proposed project area below the uppermost layers, therefore shall be closely monitored to quickly and professionally collect any specimens without impeding development. Sediment samples shall be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation shall be deposited in an accredited and permanent scientific institution for the benefit of current and future generations. Additionally, implementation of MM-3a and MM-3b would bring impacts to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-3a Prior to the issuance of grading permits, a paleontological investigation shall be conducted and a paleontological investigation report shall be submitted to and approved by the County Geologist. The investigation and report shall include, at a minimum, appropriate literature research, personnel interviews as appropriate, site geologic mapping, discussion and description of specific geologic formations/units encountered at the site, and a description of any/all paleontological resources found and/or anticipated to be present at the site. The report shall state the extent and potential significance of the paleontological resources that may exist within the proposed development and provide appropriate measures through which the impacts of the proposed development may be mitigated. In addition, the paleontological consultant shall plot all appropriate geologic and paleontological data on the parent case exhibit and include it as an appendix/figure/plate in their report.

MM CUL-3b Prior to the issuance of Grading Permits, the applicant shall retain a qualified paleontologist approved by the County of Riverside to create and implement a project-specific plan for monitoring site grading/earthmoving activities (project paleontologist). The project paleontologist retained shall review the approved development plan and grading plan and shall conduct any pre-construction work necessary to render appropriate monitoring and mitigation requirements as appropriate. These requirements shall be documented by the project paleontologist in a Paleontological Resource Impact Mitigation Program (PRIMP). This PRIMP shall be submitted to the County Geologist for review and approval prior to issuance of a Grading Permit.

Level of Significance After Mitigation

Less than significant impact.

Burial Sites

Impact CUL-4: Subsurface construction activities associated with the project may damage or destroy previously undiscovered human burial sites.

Impact Analysis

The records search, Native American scoping, and pedestrian survey did not identify any previously recorded or unrecorded cultural resources within or adjacent to the project site. Given these results and the fact that the site has been previously disturbed, it is unlikely that the project would encounter previously unidentified cultural resources, including burials, during project implementation. The measure below is recommended for unanticipated discoveries associated with human burial sites.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-4 If human remains are found, State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In accordance with this code, in the event of an unanticipated discovery of human remains, the Riverside County Coroner would be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendant (MLD). The MLD would complete the inspection of the site within 48 hours of notification and may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.

Level of Significance After Mitigation

Less than significant impact.

Tribal Cultural Resources

Impact CUL-5: Subsurface construction activities associated with the project may damage or destroy previously undiscovered tribal cultural resources.

Impact Analysis

The NAHC was contacted on August 1, 2018, to request review of the Sacred Lands File (SLF). Letters were mailed to those tribes and individuals identified by NAHC as potentially impacted by the project on August 1, 2018. The NAHC sent the results of the SLF search on July 25, 2018, which stated that a search of the SLF “failed to indicate the presence of Native American cultural resources in the immediate project area.” The NAHC provided a contact list of Native American individuals or tribal organizations that may have knowledge of cultural resources in or near the project site. Letters were mailed to each of the NAHC-listed contacts on August 1, 2018, requesting information

regarding any Native American cultural resources within or immediately adjacent to the project site. Responses were received back, and only one tribe, the Gabrieliño Band of Mission Indians—Kizh Nation was interested in the project site.

The records search, Native America scoping, and pedestrian survey did not identify any previously recorded or unrecorded tribal cultural resources within or adjacent to the project site. Given these results and the fact that the site has been previously disturbed, it is unlikely that the project would encounter previously unidentified cultural resources during project implementation. Implementation of MM CUL-5 is required to reduce potential impacts on previously unidentified tribal cultural resources to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-5 If tribal cultural resources are encountered during ground-disturbing activities, work in the immediate area would be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology and Historic Preservation (National Park Service 1983) would be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the archaeologist determines that the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work such as data recovery excavation may be warranted to exhaust the data potential of the resource. Evaluation process shall be approved by the agency and the Native American representative(s) as identified in during the AB 52 consultation process.

Level of Significance After Mitigation

Less than significant impact.

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3.4 - Greenhouse Gas Emissions

3.4.1 - Introduction

This section describes the existing greenhouse gas (GHG) emissions setting and potential effects from project implementation on GHG emissions in the project area and vicinity. Descriptions and analysis in this section are based on information provided by the Air Quality and GHG Analysis Report prepared by FirstCarbon Solutions (FCS) (December 19, 2018). The report is provided in its entirety in Appendix B of this Draft Focused Environmental Impact Report (EIR).

3.4.2 - Environmental Setting

Climate Change

Climate change is a change in the average weather of the Earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature changes from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (IPCC 2007a). The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

An individual project cannot generate enough GHG emissions to effect a discernible change in global climate. However, the project participates in the potential for global climate change by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on global climate change.

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit GHGs. The presence of GHGs in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcing and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, CO_2.

Individual GHG compounds have varying global warming potential and atmospheric lifetimes. CO_2, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. To describe how much global warming a given type and amount of GHG may cause, the carbon dioxide equivalent (CO_2e) is used. The calculation of the CO_2e is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, CO_2. For example, CH_4's warming potential of 25 indicates that CH_4 has 25 times greater warming effect than CO_2 on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual GHG multiplied by its global warming potential. GHGs defined by Assembly Bill 32 (AB 32) (see the Climate Change Regulatory Environment section for a description) include CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. They are described in Table 3.4-1. A seventh GHG, nitrogen trifluoride (NF_3), was added to Health and Safety Code Section 38505(g)(7) as a GHG of concern.

Table 3.4-1: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless GHG. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Hydrofluorocarbons	Hydrofluorocarbons are a group of GHGs containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Table 3.4-1 (cont.): Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is man-made and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. It has a high global warming potential of 17,200.	This gas is used in electronics manufacture for semiconductors and liquid crystal displays.
Sources: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and 2007b.		

California has begun the process of addressing pollutants referred to as short-lived climate pollutants. Senate Bill (SB) 605, approved by the Governor on September 14, 2014, requires the California Air Resources Board (ARB) to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016. The ARB released the Proposed Short-Lived Climate Pollutant Reduction Strategy in April 2016. The ARB has completed an emission inventory of these pollutants, identified research needs, identified existing and potential new control measures that offer co-benefits, and coordinate with other state agencies and districts to develop measures (ARB 2016b).

The short-lived climate pollutants include three main components: black carbon, fluorinated gases, and methane. Fluorinated gases and methane are described in Table 3.4-1 and are already included in the California GHG inventory. Black carbon has not been included in past GHG inventories; however, the ARB will include it in its comprehensive strategy (ARB 2015a).

Ozone is another short-lived climate pollutant that will be part of the strategy. Ozone affects evaporation rates, cloud formation, and precipitation levels. Ozone is not directly emitted, so its precursor emissions, volatile organic compounds (VOCs) and nitrogen oxides (NO_X) on a regional scale and CH_4 on a hemispheric scale will be subject of the strategy (ARB 2015b).

Black carbon is a component of fine particulate matter. Black carbon is formed by incomplete combustion of fossil fuels, biofuels, and biomass. Sources of black carbon within a jurisdiction may include exhaust from diesel trucks, vehicles, and equipment, as well as smoke from biogenic combustion. Biogenic combustion sources of black carbon include the burning of biofuels used for transportation, the burning of biomass for electricity generation and heating, prescribed burning of

agricultural residue, and natural and unnatural wildfires. Black carbon is not a gas but an aerosol—particles or liquid droplets suspended in air. Black carbon only remains in the atmosphere for days to weeks, whereas other GHGs that can remain in the atmosphere for years. Black carbon can be deposited on snow, where it absorbs sunlight, reduces sunlight reflectivity, and hastens snowmelt. Direct effects include absorbing incoming and outgoing radiation; indirectly, black carbon can also affect cloud reflectivity, precipitation, and surface dimming (cooling).

Global warming potentials for black carbon were not defined by the IPCC in its Fourth Assessment Report. The ARB has identified a global warming potential of 3,200 using a 20-year time horizon and 900 using a 100-year time horizon from the IPCC Fifth Assessment. Sources of black carbon are already regulated by the ARB, and air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources (ARB 2015b). Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

Water vapor is also considered a GHG. Water vapor is an important component of our climate system and is not regulated. Increasing water vapor leads to warmer temperatures, which causes more water vapor to be absorbed into the air. Warming and water absorption increase in a spiraling cycle. Water vapor feedback can also amplify the warming effect of other GHGs, such that the warming brought about by increased CO_2 allows more water vapor to enter the atmosphere (NASA 2015).

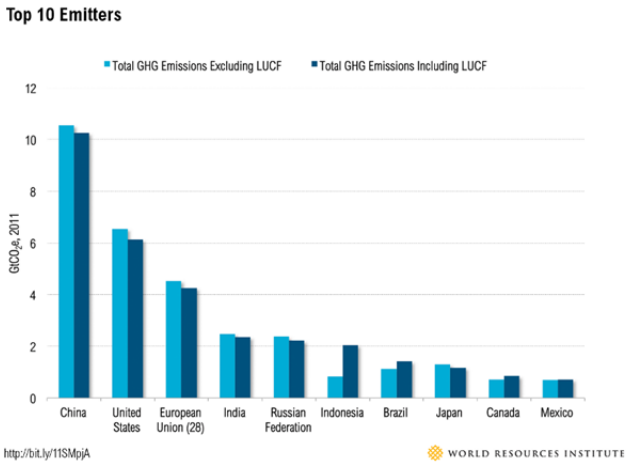
3.4.3 - Existing Conditions

Emissions Inventories

United States GHG Inventory

An emissions inventory is a database that lists, by source, the amount of air pollutants discharged into the atmosphere of a geographic area during a given time period. Emissions worldwide were approximately 43,286 million metric tons (MMT) CO_2e in 2012. As shown in Figure 1, China was the largest GHG emitter with over 10 billion metric tons of CO_2e, and the United States was the second largest GHG emitter with over 6 billion metric tons of CO_2e (WRI 2014).

Figure 1: Greenhouse Gas Emissions Trends

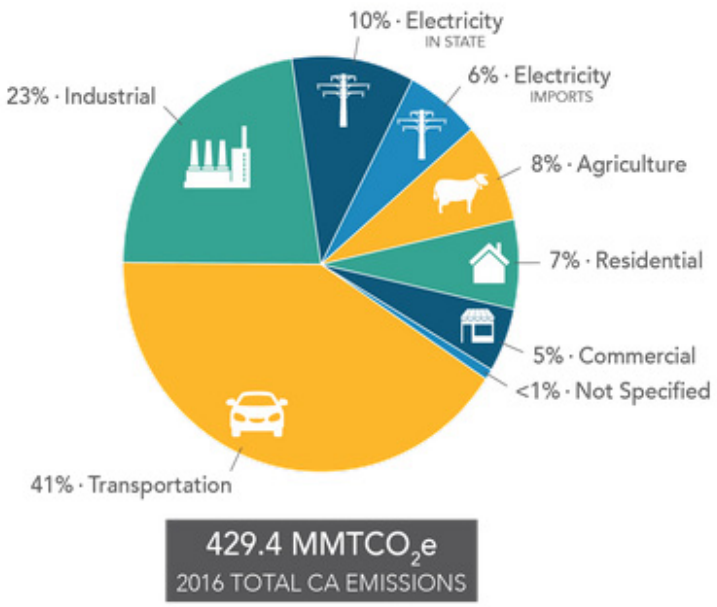


Source: WRI 2014.

California GHG Inventory

As the second largest emitter of GHG emissions in the United States, California contributes a large quantity (429.24 MMT CO_2e in 2016) of GHG emissions to the atmosphere (California Climate Change Center [CCCC] 2006). Emissions of CO_2 are byproducts of fossil-fuel combustion and are attributable in large part to human activities associated with transportation, industry/manufacturing, electricity and natural gas consumption, and agriculture. In California, the transportation sector is the largest emitter at 41 percent of GHG emissions, followed by industry/manufacturing at 23 percent of GHG emissions (Figure 2) (ARB 2018b).

Figure 2: California Greenhouse Gas Emissions by Sector



Source: ARB 2018c.

3.4.4 - Regulatory Framework

International Regulations

International organizations such as the ones discussed below have made substantial efforts to reduce GHGs. Preventing human-induced climate change will require the participation of all nations in solutions to address the issue.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations Framework Convention on Climate Change (Convention). On March 21, 1994, the United States joined a number of countries around the world in signing the Convention. Under the

Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol. The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at average of 5 percent against 1990 levels over the 5-year period from 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Kyoto Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Kyoto Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the United States Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above pre-industrial levels, subject to a review in 2015. The United Nations Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 heads of state and government, and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Paris Climate Change Agreement. Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a 4-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts, and undergo international review. The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st Session of the UNFCCC Conference of the Parties, or COP 21.

On June 1, 2017, President Trump announced the decision for the United States to withdraw from the Paris Climate Accord (White House 2017). California remains committed to combating climate change through programs aimed to reduce GHGs (ARB 2017a).

Federal Regulations

Prior to the last decade, there were no concrete federal regulations of GHGs or major planning for climate change adaptation. Since then, federal activity has increased. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG Endangerment. *Massachusetts v. EPA* (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the United States Environmental Protection Agency (EPA) regulate four GHGs, including CO_2, under Section 202(a)(1) of the Clean Air Act (CAA). A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the CAA. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA. These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the United States Supreme Court declined to review an Appeals Court ruling upholding that upheld the EPA Administrator findings (EPA 2009b).

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012). The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon if achieved exclusively through fuel economy improvements.

The EPA and the United States Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the

agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20-percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles, and a 15-percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10-percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

Mandatory Reporting of GHGs. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

New Source Review. The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for GHG Emissions for New Stationary Sources: Electric Utility Generating Units. As required by a settlement agreement, the EPA proposed new performance standards for CO_2 emissions for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatt would be required to meet an output based standard of 1,000 pounds of CO_2 per megawatt-hour (MWh), based on the performance of widely used natural gas combined cycle technology.

Cap and Trade. Cap and trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap and trade.

The Regional Greenhouse Gas Initiative is an effort to reduce GHGs among the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission

allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently only California and Quebec are participating in the Cap and Trade Program (C2ES 2015b).

State Regulations

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs.

The ARB is the State agency charged with monitoring and regulating sources of GHGs. The ARB approved the 1990 GHG emissions level of 427 MMT CO_2e on December 6, 2007 (ARB 2007). Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 MMT CO_2e. Emissions in 2020 in a Business as Usual (BAU) scenario were estimated to be 596 MMT CO_2e, which do not account for reductions from AB 32 regulations (ARB 2008). At that rate, a 28 percent reduction was required to achieve the 427 MMT CO_2e 1990 inventory. In October 2010, the ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. Under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010).

ARB Scoping Plan. The ARB Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (ARB 2008). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;

- Achieving a Statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's Clean Car Standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed cap-and-trade program. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions (ARB 2008).

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update builds upon the Initial Scoping Plan with new strategies and recommendations.

SB 375—the Sustainable Communities and Climate Protection Act of 2008. SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions; (2) aligns planning for transportation and housing; and (3) creates specified incentives for the implementation of the strategies.

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the United States District Court for the District of Columbia in 2011 (ARB 2013b). The standards were to be phased in during the 2009 through 2016 model years (ARB 2013c).

The second phase of the implementation for the Pavley Bill was incorporated into Amendments to the Low-Emission Vehicle (LEV) Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG

emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation is anticipated to reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

SB 32. The Governor signed SB 32 in September of 2016, giving the ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the 2017 Scoping Plan Update. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the State [air resources] board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

1. SB 350
   - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
   - Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard (LCFS)
   - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
   - Maintaining existing GHG standards for light- and heavy-duty vehicles.
   - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
   - Increase ZEV buses, delivery and other trucks.
4. Sustainable Freight Action Plan
   - Improve freight system efficiency.
   - Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
   - Deploy over 100,000 zero-emission trucks and equipment by 2030.
5. Short-Lived Climate Pollutant Reduction Strategy
   - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
   - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
6. SB 375 Sustainable Communities Strategies
   - Increased stringency of 2035 targets.
7. Post-2020 Cap-and-Trade Program
   - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.

- The ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.

8. 20 percent reduction in GHG emissions from the refinery sector.
9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink (ARB 2017b).

SB 1368—Emission Performance Standards. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs CO_2 per MWh.

SB 1078—Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010, by Resolution 10-23.

SB 350—Clean Energy and Pollution Reduction Act of 2015. The legislature recently approved and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.

- Reorganize the Independent System Operator to develop more regional electricity transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

SBX 7-7—The Water Conservation Act of 2009. The legislation directs urban retail water suppliers to set individual 2020 per capita water use targets and begin implementing conservation measures to achieve those goals. Meeting this Statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet in urban water use in 2020.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the State and guide the actions of State agencies.

Executive Order S-3-05. Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an Executive Order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07—Low Carbon Fuel Standard. The Governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a Statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the Executive Order established a LCFS and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The LCFS was subject to legal challenge in 2011. Ultimately, on August 8, 2013, the Fifth District Court of Appeal (California) ruled that ARB failed to comply with CEQA and the Administrative Procedure Act when adopting regulations for Low Carbon Fuel Standards. In a partially published opinion, the Court of Appeal directed that Resolution 09-31 and two executive orders of the ARB approving LCFS regulations promulgated to reduce GHG emissions be set aside. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while the ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, the ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-

carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The second public hearing for the new LCFS regulation was held on September 24, 2015 and September 25, 2015, where the LCFS Regulation was adopted. The Final Rulemaking Package adopting the regulation was filed with the Office of Administrative Law (OAL) on October 2, 2015. The OAL approved the regulation on November 16, 2015 (ARB 2015c).

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an Executive Order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's Executive Order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Executive Order sets a new interim Statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMT CO_2e. The Executive Order also requires the State's climate adaptation plan to be updated every 3 years and for the State to continue its climate change research program, among other provisions.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. California Code of Regulations (CCR), Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Included in the scope of these regulations are 23 categories of appliances. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

Title 24 Energy Efficiency Standards. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response

to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The newest version of Title 24 adopted by the CEC went into effect on January 1, 2017 (CEC 2016).

Title 24 California Green Building Standards Code (CCR Title 24, Part 11 Code) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The Bill requires local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected for Ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (Executive Order B-29-15) directed the Department of Water Resources to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the Ordinance.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)."

Section 21097 was also added to the Public Resources Code, which provided an exemption until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA. The Natural Resources Agency completed the approval process and the Amendments became effective on March 18, 2010.

The 2010 CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

California Supreme Court GHG Ruling

In a November 30, 2015 ruling, the California Supreme Court in *Center for Biological Diversity (CBD) v. California Department of Fish and Wildlife (CDFW)* on the Newhall Ranch project concluded that whether the project was consistent with meeting Statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25-27 of the ruling to address this issue summarized below:

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals (p. 25).
- **Compliance with Regulatory Programs or Performance Based Standards**. A lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities" (p. 26).
- **Compliance with GHG Reduction Plans or Climate Action Plans**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or GHG emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (p. 26).
- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (p. 27).

Regional

The project is within the South Coast Air Basin (SoCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

SCAQMD Regulation XXVII, Climate Change

SCAQMD Regulation XXVII currently includes three rules:

- **Rule 2700:** The purpose of Rule 2700 is to define terms and post global warming potentials.
- **Rule 2701:** The purpose of Rule 2701, Southern California Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- **Rule 2702:** The Greenhouse Gas Reduction Program was adopted on February 6, 2009. The purpose of this rule is to create a GHG Program for GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

Local

The City of Riverside has adopted the Riverside Restorative Growthprint (RRG), which combines two plans: the Economic Prosperity Action Plan (RRG-EPAP) and the Climate Action Plan (RRG-CAP), and is used to promote entrepreneurship and smart growth while advancing the City of Riverside's GHG emission reduction goals. The RRG-CAP remains committed to the emissions reduction target of 15 percent below the City's 2010 GHG emissions levels by 2020, consistent with the State's AB 32 goal of reducing emissions to 1990 levels. The RRG-CAP further establishes a 2035 target of 49 percent below the City's 2007 baseline GHG emissions levels, in order to meet the requirements of AB 32 and Executive Order S-3-05, which calls for 80 percent below 1990 levels by 2050 (City of Riverside 2016).

3.4.5 - Methodology

Model Selection and Guidance

The California Emissions Estimator Model (CalEEMod) version 2016.3.1 was used to estimate the project's construction and operation-related GHG emissions. CalEEMod was developed in cooperation with air districts throughout the State and is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential GHG emissions associated with construction and operation from a variety of land uses.

Greenhouse Gases Assessed

This analysis is restricted to GHGs identified by AB 32, which include CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The project would primarily generate CO_2, CH_4, and N_2O resulting from fossil fuel combustion.

The project may emit GHGs that are not defined by AB 32. For example, the project may generate aerosols through emissions of diesel particulate matter from the vehicles and trucks that would access the project site. Aerosols are short-lived particles, as they remain in the atmosphere for about one week. Black carbon is a component of aerosol. Studies have indicated that black carbon has a high global warming potential; however, the Intergovernmental Panel on Climate Change states that it has a low level of scientific certainty (IPCC 2007).

Water vapor could be emitted from evaporated water used for landscaping, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities.

The project would emit NO_X and volatile organic compounds, which are ozone precursors. Ozone is a GHG; however, unlike the other GHGs, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis. Stratospheric ozone can be reduced through reactions with other pollutants.

Certain GHGs defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

Construction

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site GHG emissions principally consist of exhaust emissions from heavy-duty construction equipment. Off-site GHG emissions would occur from motor vehicle exhaust from material delivery vehicles and construction worker traffic.

The construction parameters used to estimate the project's construction-related emissions were based on applicant-provided data and CalEEMod default-provided assumptions. Full assumptions are detailed in the CalEEMod output contained as part of Appendix B of this Draft Focused EIR.

Operation

Operational GHG emissions are those GHG emissions that occur during operation of the project. The major sources are summarized below.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the project site. The emissions were estimated using CalEEMod. The trip generation rates for the project were adjusted in the model based on information obtained from the project's Traffic Impact Analysis report (Linscott, Law & Greenspan 2018). No other changes were made to the default mobile-source parameters.

Architectural Coatings

Paints release VOC emissions during application and drying. The buildings in the project would be repainted on occasion. CalEEMod defaults were used for this purpose.

Consumer Products

Consumer products are various solvents used in non-industrial applications, which emit VOCs during their product use. "Consumer Product" means a chemically formulated product used by household and institutional consumers, including but not limited to detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products, but it does not include other paint products, furniture coatings, or architectural coatings (ARB 2011b). The default emission factor developed for CalEEMod was used.

Landscape Equipment

The landscaping equipment (leaf blowers, chain saws, mowers) would generate GHG emissions as a result of fuel combustion based on assumptions in the CalEEMod model.

Electricity

For electricity-related emissions, CalEEMod contains default electricity intensity factors for various utilities throughout California. For the purposes of the project, the Riverside Public Utilities emission factor was selected to quantify electricity emissions. The project is proposed to be operational in the

year 2020. As such, the carbon dioxide emission factor was adjusted consistent to the SB-1078 RPS goal of achieving utility providers achieving 33 percent mix of renewable energy in their retail sales. The CalEEMod's adjusted emission factor for Riverside Public Utilities are shown below.

- **Carbon dioxide:** 1,007.65 pound per megawatt hour (lb/MWh)
- **Methane:** 0.029 lb/MWh
- **Nitrous oxide:** 0.006 lb/MWh

Natural Gas

There would be emissions from the combustion of natural gas used for the project (water heaters, heat, etc.). CalEEMod has two categories for natural gas consumption: Title 24 and non-Title 24. CalEEMod defaults were used.

Water and Wastewater

There would be emissions from the combustion of natural gas used for the project (water heaters, heat, etc.). CalEEMod has two categories for natural gas consumption: Title 24 and non-Title 24. CalEEMod defaults were used.

Solid Waste

GHG emissions would be generated from the decomposition of solid waste generated by the project. CalEEMod was used to estimate the GHG emissions from this source. The CalEEMod default for the mix of landfill types is as follows:

- Landfill no gas capture—6 percent;
- Landfill capture gas flare—94 percent;
- Landfill capture gas energy recovery—0 percent.

Vegetation

There is currently carbon sequestration occurring on-site from sparse vegetation. The site is currently vacant and heavily disturbed. The project would plant trees and integrate landscaping into the project design, which would provide carbon sequestration. However, the number of trees to be planted is unknown and data are insufficient to accurately determine the impact that existing plants have on carbon sequestration. For this analysis, it was assumed that the loss and addition of carbon sequestration that are due to the project would be balanced; therefore, emissions due to carbon sequestration were not included.

3.4.6 - Thresholds of Significance

CEQA Guidelines

CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on GHGs, the type, level, and impact of emissions generated by the project must be evaluated.

The following GHG significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

(a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

(b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Thresholds of Significance for this Project

The SCAQMD developed interim recommended significance thresholds for GHGs for local lead agency consideration (SCAQMD draft local agency threshold) in 2008; however, the SCAQMD Board has not approved the thresholds as of the date of this analysis. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 metric tons (MT) CO_2e per year
  - Based on land use type: residential: 3,500 MT CO_2e per year; commercial: 1,400 MT CO_2e per year; industrial: 10,000 MT CO_2e; or mixed use: 3,000 MT CO_2e per year
- Tier 4 has the following options:
  - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 MT CO_2e/SP/year for projects and 6.6 MT CO_2e/SP/year for plans;
  - Option 4, 2035 target: 3.0 MT CO_2e/SP/year for projects and 4.1 MT CO_2e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD provided substantial evidence is support of its threshold approach. The SCAQMD discusses its draft thresholds in the following excerpt (SCAQMD 2008c):

> The overarching policy objective with regard to establishing a GHG significance threshold for the purposes of analyzing GHG impacts pursuant to CEQA is to establish a

> performance standard or target GHG reduction objective that will ultimate contribute to reducing GHG emissions to stabilize climate change. Full implementation of the Governor's Executive Order S-3-05 would reduce GHG emissions 80 percent below 1990 levels or 90 percent below current levels by 2050. It is anticipated that achieving the Executive Order's objective would contribute to worldwide efforts to cap GHG concentrations at 450 ppm, thus, stabilizing global climate.
>
> As described below, staff's recommended interim GHG significance threshold proposal uses a tiered approach to determining significance. Tier 3, which is expected to be the primary tier by which the AQMD will determine significance for projects where it is the lead agency, uses the Executive Order S-3-05 goal as the basis for deriving the screening level. Specifically, the Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to some type of CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact.
>
> Therefore, the policy objective of staff's recommended interim GHG significance threshold proposal for project's where the SCAQMD is the lead agency is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that staff estimates that these GHG emissions would account for less than one percent of future 2050 statewide GHG emissions target (85 MMT CO_2e/yr). In addition, these small projects would be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory.

In summary, the SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

The SCAQMD Tier 3 threshold was expanded to include non-industrial projects, as explained in the minutes from the most recent working group meeting (SCAQMD 2010):

> Similarly, with regard to numerical residential/commercial GHG significance thresholds, at the 11/19/2009 stakeholder working group meeting staff presented two options that lead agencies could choose: option #1—separate numerical thresholds for residential projects (3,500 MT CO_2e/year), commercial projects (1,400 MT

CO_2e/year), and mixed use projects (3,000 MT CO_2e/year) and; option #2—a single numerical threshold for all non-industrial projects of 3,000 MTCO_2e/year. If a lead agency chooses one option, it must consistently use that same option for all projects where it is lead agency. The current staff proposal is to recommend the use of option #2, but allow lead agencies to choose option #1 if they prefer that approach.

To determine whether the project would have a significant impact with respect to the generation of GHG emissions, this analysis utilizes the SCAQMD's draft local agency Tier 3 threshold of 3,000 MT CO_2e per year.

Section 15064.4(b) of the CEQA Guideline amendments for GHG emissions state that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- **Consideration No. 1**: The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- **Consideration No. 2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration No. 3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

3.4.7 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

Greenhouse Gas Emissions

Impact GHG-1:	**The project would not generate direct and indirect greenhouse gas emissions that would result in a significant impact on the environment.**

Impact Analysis

Although construction-related GHG emissions are temporary in nature, the total amount of emissions could have a substantial contribution to a project's total GHG emissions. SCAQMD recommends that construction-related GHG emissions be amortized over the life of the project, which is defined as 30 years, and added to annual operational emissions. Construction-related GHG emissions would occur from fossil fuel combustion for heavy-duty construction equipment, material delivery and haul trucks, and construction worker vehicles. Please refer to Appendix B of this Draft Focused EIR for assumptions

used to estimate construction-related GHG emissions. Table 3.4-2 presents the project's total construction-related GHG emissions and amortized construction emissions.

Table 3.4-2: Construction Greenhouse Gas Emissions

Construction Phase	On-site (MT CO_2e per year)	Off-site (MT CO_2e per year)	Total MT CO_2e per year
2020			
Site Preparation	16.9	0.8	18
Grading	26.3	1.4	28
Building Construction—2020	144.5	230.0	374
2021			
Building Construction—2021	123.5	192.6	316
Paving	20.2	1.3	22
Architectural Coating	2.6	3.5	6
Total	—	—	**763**
Amortized Emissions[1]	—	—	***25***

Notes:
MT CO_2e per year = metric tons of carbon dioxide equivalent per year
Unrounded numbers were used in calculations, including reported totals.
[1] Pursuant to SCAQMD's guidance, total construction emissions are amortized over the 30-year life of the project.
Source: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR).

Following buildout of the project, long-term operational emissions would be generated from area-, energy-, and mobile-source emissions. As described in Section 3.4.5, Methodology, indirect GHG emissions associated with water consumption and solid waste disposal would also be generated by the proposed elementary school development. Table 3.4-3 presents the project's annual operational emissions along with the amortized construction emissions. Pursuant to SCAQMD's guidance, the sum of these emissions should be used to compare with the applicable threshold of significance.

Table 3.4-3: Operational Greenhouse Gas Emissions

Emissions Source	Emissions (MT CO_2e per year)
Area	0
Energy	398
Mobile	1,695
Waste	74
Water	62
Amortized Construction	25
Total Project Emissions	**2,255**

Table 3.4-3 (cont.): Operational Greenhouse Gas Emissions

Emissions Source	Emissions (MT CO_2e per year)
Applicable SCAQMD Threshold	**3,000**
Potentially Significant?	**No**
Notes: MT CO_2e = metric tons of carbon dioxide equivalent Unrounded results used to calculate totals. Source of emissions: CalEEMod Output (Appendix A of the Air Quality and GHG Analysis Report contained as Appendix B of this Draft Focused EIR). Source of threshold: SCAQMD, 2008.	

As shown in Table 3.4-3, the project's annual operational plus amortized construction emissions would generate 2,255 MT CO_2e per year, which would not exceed the SCAQMD's screening threshold of 3,000 MT CO_2e per year. This is therefore considered a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Conflict with Plan, Policy, or Regulation that Reduces Emissions

Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.

Impact Analysis

The City of Riverside adopted the Riverside Restorative Growthprint (RRG) on January 5, 2016. The RRG combines two plans: the Economic Prosperity Action Plan (RRG-EPAP) and the Climate Action Plan (RRG-CAP), and is used to promote entrepreneurship and smart growth while advancing the City of Riverside's GHG emission reduction goals. As a qualified GHG reduction strategy, the RRG-CAP builds upon the emission reduction target, goals, and policies established for the City in the 2014 Western Riverside Council of Government's Subregional Climate Action Plan (WRCOG-CAP) to demonstrate consistency with the AB 32 goal of reducing emissions to 1990 levels. The RRG-CAP remains committed to the emissions reduction target set forth in the WRCOG-CAP of achieving 15 percent below the City's 2010 GHG emissions levels by 2020. The RRG-CAP further establishes a 2035 target of 49 percent below the City's 2007 baseline GHG emissions levels, in order to meet the requirements of AB 32 and Executive Order S-3-05, which calls for 80 percent below 1990 levels by 2050 (City of Riverside 2016). The RRG-CAP includes reduction measures that would enable the City

to achieve the AB 32 goal. As such, project consistency with GHG Impact-2 would be based on project consistency with the reduction measures specified in the RRG-CAP.

Project consistency with the applicable reduction measures of the RRG-CAP are assessed below in Table 3.4-4.

Table 3.4-4: Project Consistency with the Riverside Restorative Growthprint Climate Action Plan

Measure	Description	Project Consistency
State level		
SR-2	2013 California Building Energy Efficiency Standards (Title 24, Part 6). Mandatory energy efficiency standards for buildings through energy efficient lighting, heating, cooling, ventilation, and water heating solutions.	**Consistent.** The project would, at a minimum, comply with the 2016 Title 24 energy efficiency standards, which are 5 percent more stringent than previous standards.
SR-13	Construction and Demolition Waste Diversion: Meet mandatory requirement to divert 50 percent of construction and demolition waste from landfills by 2020 and exceed requirement by diverting 90 percent of construction and demolition waste from landfills by 2035.	**Consistent.** The project would comply with the 2016 California Green Building Standards Code, codified in the City of Riverside Municipal Code Chapter 16.07, which includes the following construction and demolition waste diversion requirements: • A minimum of 65 percent of nonhazardous construction and demolition waste shall be recycled. • Universal Waste shall be properly disposed of and diverted from landfills. • 100 percent of excavated soil and land clearing debris shall be reused or recycled.[1]
T-1	Bicycle Infrastructure Improvements: Expand on-street and off-street bicycle infrastructure, including bicycle lanes and bicycle trails.	**Consistent.** There is one bikeway along the project site.[2] Development of the project would comply with the development standards for the City of Riverside.
W-1	Water Conservation and Efficiency: Reduce per capita water use by 20 percent by 2020.	**Consistent.** The project would comply with the applicable water conservation and efficiency measures in the 2016 California Green Building Standards Code, codified in the City of Riverside Municipal Code Chapter 16.07. The project would also comply with the Water Efficient Landscaping and Irrigation requirements under the Municipal Code Chapter 19.57.

Notes:
[1] City of Riverside Municipal Code 2018
[2] City of Riverside 2012
Source of measures: City of Riverside 2018

As shown above in Table 3.4-4, the project would comply with the applicable reduction measures of the RRG-CAP. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.5 - Hydrology and Water Quality

3.5.1 - Introduction

This section describes the existing hydrology and water quality setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on the 2019 Preliminary Hydrology Report prepared by KPFF Engineering (KPFF) and included under Appendix E.

3.5.2 - Environmental Setting

In 1987, the Federal Water Pollution Control Act (Clean Water Act [CWA]) was amended to effectively prohibit stormwater discharge of pollutants to waters of the United States, unless the discharge complies with a National Pollutant Discharge Elimination System (NPDES) Permit. The 1987 amendments to the CWA established a framework for regulating municipal, industrial, and construction stormwater discharges under the NPDES program. In California, these permits are issued through the State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Boards (RWQCBs).

The City of Riverside is located within the Santa Ana RWQCB. Exhibit 3.5-1 depicts the watershed. In a proactive effort to improve water quality, the City of Riverside, along with other Riverside County cities within the Santa Ana RWQCB, voluntarily applied for and received a permit to discharge stormwater into the Santa Ana River. The NPDES Municipal Separate Storm Sewer System (MS4) Permit was originally approved in 1990. The Riverside County permit was updated in 2010, expired in 2015, and then was granted an extension Order No R8-2010-0033 Permit No CAS 618033.In compliance with the Permit, stormwater quality management programs with the ultimate goal of accomplishing the requirements of the Permit and reducing the amount of pollutants in stormwater and urban runoff have been implemented.

Stormwater runoff from a site has potential to contribute oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to a stormwater runoff conveyance system. The development must be designed to minimize, to the greatest extent practicable, the introduction of pollutants of concern that may result in significant impacts, generated from site runoff from directly connected impervious areas, to the stormwater conveyance system.

3.5.3 - Regulatory Framework

State

In California, the regulation, protection, and administration of water quality are carried out by the State Water Board and nine RWQCBs, as mentioned above. The State is divided into nine regions due to regional issues related to water quality and quantity. In compliance with Section 303 of the CWA and the Porter-Cologne Water Quality Control Act, each RWQCB is required to adopt a Water Quality Control Plan or Basin Plan which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface water, local water quality conditions and problems, and Total Maximum Daily Loads (TMDLs). The project is located within the Santa Ana Region, which is

addressed in the Water Quality Control Plan for the Santa Ana Basin, dated January 24, 1995, updated in 2008. The Santa Ana Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of its regional waters. The Santa Ana RWQCB has the authority to implement water quality protection standards through the issuance of permits to waters within its jurisdiction.

States are required to develop a TMDL to address each pollutant causing impairment. A TMDL defines how much of a pollutant a water body can tolerate and still meet water quality standards. Each TMDL must account for all sources of the pollutant, including discharges from wastewater treatment facilities; runoff from homes, forested lands, agriculture, and streets or highways; contaminated soils/sediments, legacy contaminants such as dichlorodiphenyltrichloroethane (DDT) and polychlorinated biphenyls (PCBs), on-site disposal systems (septic systems) and deposits from the air. Federal regulations require that the TMDL, at a minimum, account for contributions from point sources (permitted discharges) and contributions from non-point sources, including natural background. In addition to accounting for past and current activities, TMDLs may consider projected growth that could increase pollutant levels. TMDLs allocate allowable pollutant loads for each source, and identify management measures that, when implemented, will assure that water quality standards are attained.

The Santa Ana RWQCB administers the NPDES permit requirements for the project area, including the project. In 1999, the State adopted the NPDES General Permit for Storm Water Discharges Associated with Construction Activities (Construction Activities General Permit) (State Water Board Order No 99-08-DWQ, NPDES CAS000002) which requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for applicable projects, where the threshold was reduced from 5 acres or greater of soil disturbance, set by the 1992 General Construction Permit, to 1 acre or greater of soil disturbance. The permit required applicable projects to have a SWPPP. The SWPPP specifies Best Management Practices (BMPs) that would prevent construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off-site into receiving waters; eliminates or reduces non-stormwater discharges to storm sewer systems and waters of the State; and, provides a monitoring program for the routine inspection of all BMPs.

The new Industrial General Permit (NPDES Order 2014-0057-DWQ) was adopted on April 1, 2014 and became effective on July 1, 2015. The Industrial General Permit requires electronic applications and reporting (State Water Board 2015b). This Order regulates stormwater runoff and urban runoff, which includes stormwater and authorized non-stormwater discharges from traditional construction activities such as residential, commercial, and industrial development, as well as linear underground/overhead construction projects. Construction General Permit (NPDES Order No. 2009-0009-DWQ) authorizes the discharge of stormwater runoff from construction projects that may result in land disturbance of 1 acre or more (or less than 1 acre, if it is part of a larger common plan of development or sale, which is 1 acre or more). Unlike some of its predecessors, this Construction General Permit classifies construction sites under three Risk Levels. Risk Level 1 sites are subject to requirements similar to those established in Order No. 99-08-DWQ. Risk Level 2 sites are subject to Numeric Action Levels (NALs) for pH and turbidity, in addition to Risk Level 1 requirements. Risk Level 3 sites are subject to Numeric Effluent Limits (NELs), in addition to Risk Level 1 and 2 requirements. Project Risk Levels are determined by the project's sediment discharge risk and its receiving water risk. The discharger shall develop a SWPPP and

a construction site-monitoring program prior to the commencement of any of the construction activities, to be implemented until project completion.

California Fish and Game Code Sections 1601–1603

This legislation is intended to protect and conserve fish and wildlife resources of the State by requiring a permitting procedure for diverting, changing, or otherwise disturbing a current natural waterway. A Streambed Alteration Permit is required from the California Department of Fish and Wildlife (CDFW) (formerly the California Department of Fish and Game), for any changes to the stream, stream channel, or banks. For the project, compliance with the Fish and Game Code would be required if tributaries on the project are diverted, changed, or otherwise disturbed. Compliance is usually satisfied with issuance of a permit from CDFW, typically referred to as a "1602 Permit."

Local

City of Riverside General Plan

The City of Riverside General Plan 2025 is a framework for strategic planning and decision-making regarding the City development and growth. State law mandates certain elements to be incorporated. The City of Riverside General Plan 2025 elements includes land use and urban design, circulation and community mobility, housing, public safety, education, air quality, noise, public facilities, open space conservation, parks and recreation, and historic preservation.

Public Facilities and Infrastructure Element

- **Policy PF-1.1:** Coordinate the demands of new development with the capacity of the water system.
- **Policy PF-1.2:** Support the efforts of the Riverside Public Utilities Department, Eastern Municipal Water District and Western Municipal Water District the work together for coordination of water services.
- **Policy PF-1.3:** Continue to require that new development fund fair-share costs associated with the provision of water service.
- **Policy PF-1.4:** Ensure the provision of water services is consistent with planned growth for the General Plan area, including the Sphere of Influence, working with other providers.
- **Policy PF-1.5:** Implement water conservation programs aimed at reducing demands for new and existing development.
- **Policy PF-1.7:** Protect local groundwater resources from localized and regional contamination sources such as septic tanks, underground storage tanks, industrial businesses, and urban runoff.
- **Policy PF-3.1:** Coordinate the demands of new development with the capacity of the wastewater system.
- **Policy PF-3.2:** Continue to require that new development fund fair-share costs associated with the provision of wastewater service.
- **Policy PF-3.3:** Pursue improvements and upgrades to the City's wastewater collection facilities consistent with current master plans and the City's Capital Improvement Program.
- **Policy PF-3.4:** Continue to investigate and carry out cost-effective methods for reducing stormwater flows into the wastewater system and the Santa Ana River.

- **Policy PF-4.1:** Continue to fund and undertake storm drain improvement projects as identified in the City of Riverside Capital Improvement Program.
- **Policy PF-4.2:** Continue to cooperate in regional programs to implement the NPDES Program.
- **Policy PF 4.3:** Continue to routinely monitor and evaluate the effectiveness of the storm drain system and make adjustments as needed.

3.5.4 - Methodology

Hydrology analysis for 10-year and 100-year design storm events were performed using the Rational Method in accordance with the Riverside County Flood Control and Water Conservation District Hydrology Manual (April 1978). Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (Natural Resources Conservation Service [NRCS] 1986) was used to calculate the 24-hour Design Storm event with a 2-year return period.

3.5.5 - Existing Conditions

Hydrology and Drainage

The project site is currently an undeveloped, vacant square-shaped lot totaling 9.8 acres. The existing drainage pattern sheet flows from northwest to southeast. There are no existing buildings, structures, or known storm drains within the project limit.

The project potentially discharges site runoff into the Riverside County Flood Control and Water Conservation District Monroe Storm Drain Railroad Lateral at the southwest corner of the site along Lincoln Avenue. According to the Riverside County Flood Control and Water Conservation District Hydrology Manual (April 1978) since 1955, Riverside County Subdivision Ordinance (Number 460) has required protection of all new subdivisions from a 100-year flood event. Final assessment of the existing storm drain will be made to verify its hydraulic capacity.

Site runoff is conveyed into the County storm drains and discharge into Santa Ana River. Santa Ana River ultimately drains into the Pacific Ocean. Existing hydrology and proposed conditions are provided within Exhibit 3.5-2 and Exhibit 3.5-3.

Water Quality

According to the 2010 CWA Section 303 (d) List of Water Quality Limited Segments, the Santa Ana River, which the site will discharge into, is identified to have coliform bacteria, pH, total dissolved solids, and toxicity as pollutant concerns. The Santa Ana Reach has bacteria, lead, and toxicity listed on the 303 (d) List.

Groundwater and Wet Utility

According to the Preliminary Environmental Assessment (PEA) report prepared by Leighton Consulting, Inc. (July 5, 2018) the depth to groundwater near the site is approximately 85 to 121 feet below ground surface. Groundwater was not encountered during the on-site investigation.

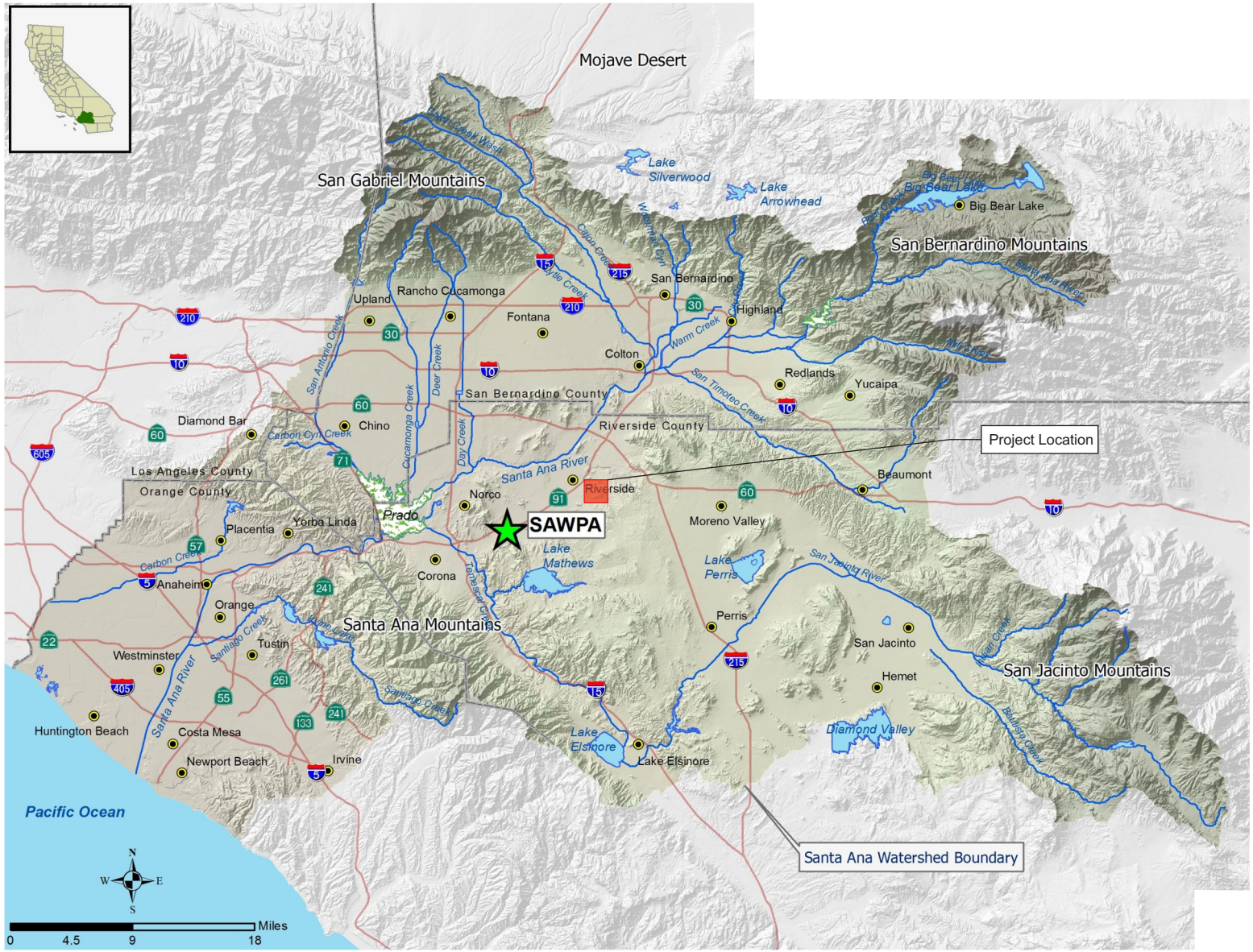


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Exhibit 3.5-1
Santa Ana River Watershed Location Map

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RIVERSIDE UNIFIED SCHOOL DISTRICT
CASA BLANCA ELEMENTARY SCHOOL PROJECT
FOCUSED ENVIRONMENTAL IMPACT REPORT

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LEGEND

- PROPERTY LINE
- DRAINAGE AREA BOUNDARY
- EXISTING STORM DRAIN
- FLOW DIRECTION

PLAN

SCALE: 1" = 100'-0"

0 50' 100' 200'

GRAPHIC SCALE

EXISTING HYDROLOGY AREAS					
AREA	TOTAL AREA (SF)	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	% IMPERVIOUS	% PERVIOUS
A	426,888	405,544	21,344	5.0	95

Source: kpff, March 2019.

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Exhibit 3.5-2
Existing Hydrology

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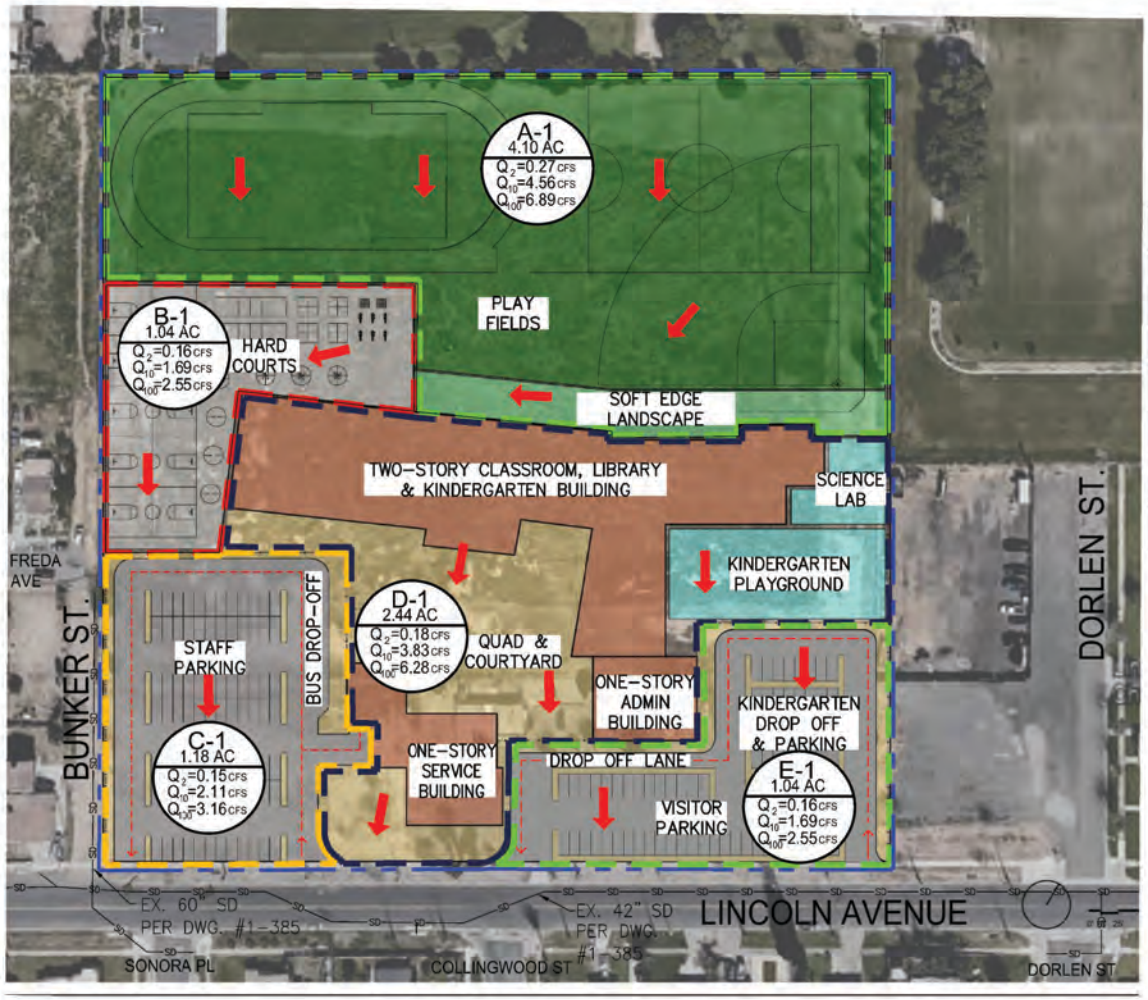

LEGEND

- PROPERTY LINE
- DRAINAGE AREA BOUNDARIES
- EXISTING STORM DRAIN
- FLOW DIRECTION

PROPOSED HYDROLOGY AREAS

AREA	TOTAL AREA (SF)	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	% IMPERVIOUS	% PERVIOUS
A-1	178,596	169,666	8,930	5.0	95.0
B-1	45,302	4,530	40,772	90.0	10.0
C-1	51,401	5,140	46,261	90.0	10.0
D-1	106,286	10,629	95,657	90.0	10.0
E-1	45,303	4,530	40,773	90.0	10.0

PLAN

SCALE: 1" = 100'-0"

0 50' 100' 200'

GRAPHIC SCALE

Source: kpff, March 2019.

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Exhibit 3.5-3
Proposed Hydrology

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Additional preliminary assessments of the existing site soil conditions were made based on the Hydrologic Soils Group Map in the County of Riverside Hydrology Manual[1], as well as the Riverside County Stormwater and Conservation Tracking Tool[2]. Initial assumptions found that the soil is Group C consisting of Arlington loam. Group C soils are moderately fine-to-fine texture and have slow rate of water transmission and infiltration.

According to preliminary research, there is an existing 6-inch water line located at the southwest corner of the Lincoln Avenue and Sonora Street. There is an existing 10-inch sewer line along the centerline of Lincoln Avenue. The exact location of these wet utilities will be verified prior to permit issuance.

Final infiltration assessments at proposed infiltration areas will be made prior to permit issuance.

3.5.6 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hydrology and water quality impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
   (i) result in substantial erosion or siltation on- or off-site;
   (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
   (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
   (iv) impede or redirect flood flows?

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

[1] Riverside County Flood Control and Water Conservation District Hydrology Manual. 1978.
[2] Riverside County Flood Control and Water Conservation District. http://rcstormwatertool.org. March 12, 2019.

3.5.7 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Surface and Groundwater Quality

Impact HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Impact Analysis

As identified in Table 3.5-1, the analysis examined the existing site and proposed improvements in relation to each storm events. Peak flow increased by 0.55 cubic feet per second (cfs) for the 2-year storm event, 6.11 cfs for the 10-year event, and by 9.10 cfs for the 100-year event. See Attachment A within the Preliminary Hydrology Report for detailed calculations of the existing conditions. See Attachment B within the Preliminary Hydrology Report for detailed calculations of the proposed conditions.

Table 3.5-1: Peak Flow Analysis for Storm Events

Condition	Q-2 (cfs)	Q-10 (cfs)	Q-100 (cfs)
Existing	0.37	7.77	12.33
Proposed	0.92	13.88	21.43
Δ Total	**0.55**	**6.11**	**9.10**

Preliminary assessments for the project indicated that hydromodification control measures may be required. Hydromodification refers to the changes in hydrology associated with changes in land use or cover. The volume of stormwater runoff for the project post-development condition is significantly different from the pre-development condition of a 2-year storm event.

Integration of site design measures as retention, infiltration, conservation of natural areas and permeable roadways should be used holistically to address stormwater quality requirements as well as reduce the total amount of stormwater runoff. The design and selection of stormwater BMPs will comply with Santa Ana RWQCB requirements for Priority Development Projects.

For storm events exceeding the 2-year storm event, overflow can discharge onto Lincoln Avenue and travel into existing County catch basins and into the Riverside County Flood Control and Water Conservation District Monroe Storm Drain Railroad Lateral. This storm drain should have the capacity for a 100-year storm event[3]. Final hydromodification assessment will be conducted prior to design development. Impacts to hydrology are site specific and not cumulative in nature.

[3] According to Riverside County Flood Control and Water Conservation District Hydrology Manual, dated April 1978, since 1955, Riverside County Subdivision Ordinance (Number 460) has required protection of all new subdivisions from a 100-year flood event.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Groundwater Supply or Recharge

Impact HYD-2:	**The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.**

Impact Analysis

Construction and operation do not anticipate using existing groundwater. Therefore, the project would not substantially decrease groundwater level. The proposed project is required to comply with all existing regulations to prevent contamination and must meet regulatory water quality standards.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Drainage Leading to Erosion or Siltation, Flooding, Additional Sources of Polluted Runoff, or Impedance of Flood Flows

Impact HYD-3: **The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

i) result in substantial erosion or siltation on- or off-site;

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

(iv) impede or redirect flood flows?

Impact Analysis

Short-term impacts

Project construction impacts to site runoff could occur during excavation, grading, and various construction activities (such as equipment staging, stockpiling, access and haul routes, etc.). Proposed elevation differences, grading and slopes will conform to local erosion and sediment control and design standards to protect, stabilize and prevent sediment. Therefore, the project would not substantially alter the existing drainage pattern of the site or area resulting in substantial erosion or siltation on-or off-site. Impacts would be less than significant.

In order to comply with existing water quality standards and waste discharge requirements during all grading and construction activities, the project will be subject to the Construction General Permit. The permit requires the property owner/developer to prepare and implement a SWPPP. To comply with the Permit, the SWPPP is required to include stormwater BMPs during both the construction and post-construction (permanent) phase of the project.

Long-term impacts

Project development will increase the amount of imperviousness, which will result in an increase in stormwater flows. Due to post-project activities, contamination of stormwater with sediment and other pollutants such as trash and debris, oils, grease, nutrients and other toxic chemicals is highly probable.

In compliance with the Waste Discharge Requirements for an MS4 Permit, the City of Riverside requires a Planning Development Document in the form of Water Quality Management Plan (WQMP). The WQMP is used as a guidance to minimize potential pollutant burden during the operation phase.

Design principals should offer an innovative approach to urban stormwater management, one that does not rely on the conventional end-of-pipe or in-the-pipe structural methods, but instead uniformly or strategically integrates stormwater controls throughout the urban landscape. Effective source controls should offer another strategy to reduce a project's need for treatment. This project

shall incorporate, where applicable, stormwater BMPs into the project design, in the following progression: Low Impact Development BMPs and Source Control BMPs.

Low Impact Development BMP strategies include, but are not limited to maintaining predevelopment rainfall runoff characteristics, conservation of natural areas, minimizing directly connected impervious areas, and maximizing canopy interception and water conversations.

Source Control BMPs are operational practices that will be implemented to the best extent to prevent pollutants from the project to be in contact with stormwater and non-stormwater runoff. A Source Control Checklist per the Riverside County WQMP can be found in Attachment E. With the implementation of BMPs, impacts related to stormwater drainage systems and polluted runoff would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Risk of Pollutant Release Due to Inundation

Impact HYD-4:	**The project would not be located in a flood hazard zone, tsunami, or seiche zone, or risk release of pollutants due to project inundation.**

Impact Analysis

According to the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) No. 06065C0720G, the project is not located within a 100-year flood hazard area. The project is determined to be within Zone X, which includes areas outside the 0.2 percent annual chance floodplain.

The project is located approximately 40 miles inland from the Pacific Ocean and is not located near any large bodies of water. Furthermore, the site and adjacent area is in an urbanized area with relatively flat topography. Therefore, the project will not be affected by tsunamis, seiches, or mudflows.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Water Quality Control or Sustainable Groundwater Management Plans Consistency

Impact HYD-5:	**The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.**

Impact Analysis

The proposed project would comply with State, federal, and local requirements.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.5.8 - Recommendations

Development of the project requires the implementation of BMPs and Project Design Features to be incorporated into the project or regulatory requirements, as set forth by the Riverside Unified School District. These are described in detail below.

- **Project Design Feature 1—**WQMP Design Standards—Proposed BMP systems would comply with Riverside WQMP design standards.
- **Project Design Feature 2—**Stormwater Management Systems would meet water quality treatment requirements as well as additional runoff storage that would be needed to fully mitigate peak runoff for the 2-year storm event.
- **Project Design Feature 3—**Develop a SWPPP to comply with NPDES requirements.

3.6 - Land Use and Planning

3.6.1 - Introduction

This section describes the existing land use and potential effects from project implementation on the site and its surrounding area. This section also describes the project's consistency with Southern California Association of Governments (SCAG) regional growth policies. Descriptions and analysis in this section are derived from field observation, review of pertinent planning documents including the City of Riverside General Plan, and project information contained in Appendix A, Notice of Preparation (NOP) and Scoping Meeting Documents.

3.6.2 - Environmental Setting

Land Use

Project Site

The project site is located in the City of Riverside, in Riverside County, California (Exhibit 2-2). More specifically, it is located within the Casa Blanca Neighborhood on the northern side of Lincoln Avenue and Sonora Place at 7351 Lincoln Avenue (Assessor's Parcel Number [APN] 230-360-001). The 9.8-acre project site was formerly occupied by a KPRO 1570 AM transmitter building and antenna system.

Regional access to the site is provided via State Route 91 (SR-91) via the Madison Street exit, which is located approximately 0.7 mile northwest of the project site and approximately 4.6 miles southwest of State Route 60 (SR-60), in the central portion of the City of Riverside.

Surrounding Area

The project site is surrounded by a mix of uses that are, in turn, bordered by primarily single-family residences. The surrounding land uses include the Lincoln Avenue Church of Christ to the east, the SSgt. Salvador J. Lara Casa Blanca Public Library and residential uses to the west, residential uses to the south, Ysmael Villegas Community Center to the north, and several institutional buildings northeast of the project site. See Exhibit 3.6-1a and Exhibit 3.6-1b for existing site photos.

Land Use Designations

Project Site

The City of Riverside General Plan 2025 Land Use designation for the project site is High Density Residential (HDR), and the project is zoned for Multi-family Residential (R-3-1500) uses. The City identified several underutilized parcels to rezone to allow for higher density residential use to comply with the SCAG Regional Housing Needs Assessment (RHNA) as outlined in the Housing Element Update and the Candidate Rezone Sites Booklet (City of Riverside 2017). According to the Land Use Element, the HDR land use designation allows for the development of multiple-family, condominiums and apartments with a maximum density of 29 dwelling units/acre or 18.6 person/acre. The R-3-1500 zoning allows for multiple-family residences within a single structure,

including such residential development types as apartments, town homes, and condominiums (City of Riverside Municipal Code 2018).

Casa Blanca Neighborhood and Redevelopment Plan

The project site is located within the Casa Blanca Neighborhood Plan, which is a component of the City of Riverside General Plan 2025 that provides area-specific policies and requirements to address local conditions and issues. The Casa Blanca Neighborhood gets its roots as a citrus colonia established by Mexican immigrants during the City's agricultural heyday; the Casa Blanca neighborhood is known contemporarily for being family-oriented, strong-knit, and largely residential in character. The neighborhood features many single-family homes exemplifying early twentieth century styles, particularly California Craftsman. In addition to the predominant residential component, Casa Blanca has a blend of commercial and industrial development along Indiana Avenue and Jefferson Street.

Casa Blanca's residents and the City have invested significant effort to improve the physical and economic conditions in the neighborhood. Residents have organized themselves through several active community organizations, whose activities led to the creation of one of the City's first Community Plans in 1974. The Community Plan set forth a series of land use, economic development, and social goals and objectives.

The Community Plan was updated in 1987; this update included an expansion of the planning area. The Community Plan included a number of recommendations for rezoning, which have largely been completed, but was primarily devoted to preserving, protecting and enhancing the neighborhood's single-family character. Still-relevant goals and policies from the 1987 Community Plan are reflected in the objectives and policies below, in Citywide land use and circulation objectives and policies, and in the Implementation Program for the General Plan.

To further encourage investment in the neighborhood, the City adopted a redevelopment plan for Casa Blanca. The Casa Blanca Redevelopment Area encompasses almost the entire neighborhood, as well as portions of Presidential Park and the Riverside Auto Center to the southwest and a very small portion of the Victoria neighborhood on the northeast side of Mary Street. The City looks to build on successes in Casa Blanca through continued housing rehabilitation programs, vigorous community engagement efforts, increased opportunities for adult education and job training, protection of historic neighborhood features, and local job opportunities.

The objectives and policies listed below are specific to the Casa Blanca Neighborhood. In addition, the Citywide objectives and policies in the Housing Element are also applicable, as are all other City Development Codes, Ordinances, and development standards.

- **Objective LU-43:** Perpetuate the development and redevelopment of Casa Blanca as a single-family residential community, providing decent housing in a price range affordable for ownership by present residents and future families.
- **Policy LU-44.3:** Continue improving the neighborhood's street system.

- **Objective LU-46:** Provide modern, effective public support facilities within the Casa Blanca Neighborhood and establish a partnership between community representatives and the City to attain the Neighborhood's shared goals.
- **Policy LU-46.2:** Continue current efforts through the City's Office of Neighborhoods and Redevelopment Agency to solicit broad community input into City actions affecting the Casa Blanca Neighborhood.

Surrounding Land Uses

The Casa Blanca Neighborhood includes a mix of land uses surrounding the project site, including commercial, residential, and institutional uses. Land uses surrounding the project site include the Lincoln Avenue Church of Christ to the east, the SSgt. Salvador J. Lara Casa Blanca Public Library and residential uses to the west, residential uses to the south, the Ysmael Villegas Community Center to the north, and several institutional buildings northeast of the project site.

Additionally, according to the Land Use and Urban Design Element, the City of Riverside adopted The Casa Blanca Community Plan in 1974 and updated it in 1987 (City of Riverside 2018). Adjacent areas are generally residential and institutional, and include the land use designations contained in Table 3.6-1. Adjoining properties include single-family residential developments on the south; a vacant grass lot and single-family residential development on the west, a vacant gravel lot on the east, and the Villegas Park sports fields on the north and northeast of the project site.

Table 3.6-1: Surrounding Land Use Designations

Land Use	Relationship to Project Site	Land Use Designation	
		General Plan	Zoning
Villegas Park	North	Public Park (P)	Public Facilities (PF)
Ysmael Villegas Community Center	North	P	PF
SSgt. Salvador J. Lara Library	West	Public Facilities/Institution (PF/I)	PF
Riverside Public Utilities Customer Resource Center	West	PF/I	PF
Lincoln Avenue Church of Christ	East	Medium Density Residential (MDR)	R-1-7000 Single-Family Residential
Riverside County Weights & Measures	East	PF/I	PF
Riverside County Transportation Department	East	PF/I	PF
Riverside County Purchasing	Northeast	PF/I	PF
Single Family Homes	Southwest, South, Southeast	MDR	R-1-7000 Single-Family Residential

Table 3.6 1 (cont.): Surrounding Land Use Designations

Land Use	Relationship to Project Site	Land Use Designation	
		General Plan	Zoning
Vacant Parcel	West	High Density Residential (HDR)	R-3-1500 Multiple-family Residential
Vacant Parcel	East	HDR	R-3-1500 Multiple-family Residential
Note: P = Public Park PF = Public Facility PF/I = Public Facilities/Institution MDR = Medium Density Residential HDR = High Density Residential			

Riverside Unified School District (RUSD) has the authority and discretion to determine that the City's zoning ordinances are not applicable to the site per Government Code Section 53094 because the project involves the development of a school.

Regulatory Framework

State

Southern California Association of Governments

SCAG is the nation's largest metropolitan planning organization, representing six counties, 191 cities, and over 18 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable Southern California. Over the past 40 years, SCAG has evolved as the largest of nearly 700 councils of government in the United States, functioning as the Metropolitan Planning Organization for the following six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. As the designated Metropolitan Planning Organization, SCAG is mandated by federal and State law to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Additional mandates exist at the State level (SCAG 2013).

Regional Comprehensive Plan and Guide

The project is located within the County of Riverside and is located in the middle of a six-county metropolitan region composed of Orange, Los Angeles, Ventura, Riverside, San Bernardino, and Imperial Counties. SCAG has developed a Regional Comprehensive Plan and Guide (RCPG) to help coordinate transportation and infrastructure, open space and environmental planning, with population, housing, and employment growth within the multicounty region. The RCPG, adopted in 2008, contains policies addressing planning priorities for the region adopted by the SCAG governing board, the Regional Council. Some of these are core policies that implement State or federal mandates, while most of the policies are ancillary or "advisory-only" guidance for local jurisdictions and public agencies.

Photograph 1: View of the project site facing west-northwest adjoining Lincoln Ave.

Photograph 2: View of the KPRO broadcasting building, pole-mounted transformers, satellite dishes, antenna, and guyed radio tower structure.

Photograph 3: View of the northern portion of the project site facing southwest.

Photograph 4: View of the southern portion of the project site facing southwest. Typical view of guyed ratio tower structure.

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Exhibit 3.6-1a
Site Photographs

34590005 • 03/2019| 3.6-1a_site_photos.cdr

RIVERSIDE UNIFIED SCHOOL DISTRICT
CASA BLANCA ELEMENTARY SCHOOL PROJECT
FOCUSED ENVIRONMENTAL IMPACT REPORT

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Photograph 5: Empty 55-gallon drum located behind broadcast building.

Photograph 6: Adjoining construction staging yard and associated gravel parking lot on the adjoining northern property.

Photograph 7: Adjoining residential uses to the east-southeast.

Photograph 8: Adjoining recreational uses to the north.

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Exhibit 3.6-1b
Site Photographs

34590005 • 03/2019| 3.6-1b_site_photos.cdr

RIVERSIDE UNIFIED SCHOOL DISTRICT
CASA BLANCA ELEMENTARY SCHOOL PROJECT
FOCUSED ENVIRONMENTAL IMPACT REPORT

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SCAG's RCPG includes a package of policies related to growth and development that seek to coordinate infrastructure with projected population and housing growth. In general, SCAG policies encourage job and housing opportunities to be balanced at the county or Regional Statistical Area level (both much larger than the project level). SCAG policies also encourage job growth to be concentrated near transit services and transit nodes, and existing freeways, high-occupancy-vehicle lanes, and toll roads. Given the expansive scope of and general nature of the RCPG, not all of these policies apply to every project.

2016–2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, SCAG adopted the 2016–2040 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS): Towards a Sustainable Future. The RTP/SCS is the culmination of a multi-year effort involving stakeholders from across the SCAG Region (RTP/SCS 2013). The RTP is a long-range transportation plan that is developed and updated by SCAG every 4 years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address our mobility needs.

Government Code Section 53094

Under a city or county general plan and/or zoning ordinance, schools in a particular area will be: (1) permitted by right, (2) not permitted, or (3) "conditionally permitted."

If schools are permitted by right, then a school district need take no action to comply with the general plan or zoning ordinance. Government Code Section 53094 states that a school district is not required to comply with the zoning ordinances of a county or city unless the zoning ordinance makes provision for the location of public schools and unless the city or county has adopted a general plan. Furthermore, this article authorizes the governing board of a school district to render a local zoning ordinance inapplicable to a proposed use of property by the school district, by a vote of two-thirds of its members. Within 10 days of an action to render a zoning ordinance inapplicable, the board must provide the affected county and/or city with notice of this action.

Local

City of Riverside General Plan 2025

Pursuant to the Education Element of the City of Riverside General Plan 2025, providing opportunities to receive a quality education is of vital importance to all Riverside residents. Education provides the knowledge, skills and resources to foster a thriving economy and build a harmonious community. To meet these needs for present and future residents, Riverside must focus on providing greater investments in education but also recognize that this is a community-wide responsibility, requiring partnerships among the school, local government, libraries, museums, businesses and parents.

The RUSD is the 16th largest school district in California and has experienced rapid growth since the 1990s. The RUSD opened three new elementary schools and one new middle school between 2006

and 2009. This new construction, combined with modernizations and expansions of existing campuses, maintains the RUSD's ability to meet the demands of a growing school-age population and provide high quality educational options.

Riverside's schools, colleges, and universities are an important part of what makes the City a desirable place to live. As stated in the City of Riverside General Plan 2025 Education Element, the City is committed to continued support and accommodation of the needs of educational institutions in the community. The City will also continue to work with educational facilities to support the provision of quality housing that is affordable to a variety of household income levels.

The following City of Riverside General Plan 2025 Education Element policy goals align with this project:

- **Objective ED-1:** Accommodate the growth of all educational facilities.
- **Policy ED-1.1:** Provide an adequate level of infrastructure and services to accommodate campus growth at all educational levels.
- **Policy ED-1.3:** Include school district staff in the review of annexation proposals to guide campus site selection and desirable design elements.
- **Policy ED-1.4:** Streamline the permitting process for educational facilities as practicable.
- **Policy ED-2.1:** Collaborate on strong joint-use arrangements, using as a key resource the Mayor's Joint Use Committee to create partnerships with the City, Riverside Unified School District and Alvord Unified School District and to develop methods to remove barriers to joint use, especially in new neighborhoods.
- **Objective ED-3:** Plan proactively for all education needs.
- **Poly ED-3.1:** Partner with local schools, colleges, early childhood education programs and other educational institutions to accommodate the educational needs of residents.
- **Objective ED-4:** Maintain a safe environment at all campus facilities and on routes to school.
- **Policy ED-4.3:** Work with the school districts to incorporate bicycle access, racks and bike lanes into school design.
- **Policy-ED-4.4:** Work with the school districts to effectively plan for and manage access, congestion and parking around schools.
- **Policy ED-4.5:** Support the Police Department's on-campus school resource officers.
- **Policy ED-4.6:** Work towards providing a bicycle network within Riverside that connects schools, employment centers and residential areas.
- **Policy ED-4.8:** Support the Safe Routes to School programs of the Alvord and Riverside Unified School Districts.

Applicable general plan land use policies are listed and evaluated for project consistency under Impact LUP-6.

City of Riverside Municipal Code

Title 19—Zoning Code

Title 19 of the Riverside Municipal Code (RMC) contains the Zoning Code for the City and also includes regulations for site planning and development. The zoning designation for the project site is

R-3-1500. The R-3-1500 zoning allows for multiple family residences within a single structure, including such residential development types as apartments, town homes and condominiums (City of Riverside Municipal Code 2018).

Public Facilities and Institutional Uses

The Public Facilities (PF) and Institutional Uses designation provides for schools, hospitals, libraries, utilities, the municipal airport (precise uses for the airport property are defined in the Airport Master Plan), and government institutions. Religious assembly and daycare uses may be allowed within this designation. Specific sites for public/semi-public uses are subject to discretionary approval under the Zoning Ordinance. The maximum intensity of development is a floor-area ratio of 1.0.

Public Facility Zone

The Public Facilities Zone is established to create and preserve areas for official and public uses of property and related activities, including civic center, public schools, public buildings, parks and recreation facilities, waterworks and drainage facilities, and similar areas that, for the welfare of the City, should be kept clear of particular structures or improvements, and for watershed areas for conservation of flood or stormwater, or for protection against flood or stormwater.

Any new building or structure or any exterior alteration or enlargement of an existing building or structure shall be subject to Design Review pursuant to Chapter 19.710 (Design Review).

Permitted Land Uses

If not on City owned property, the following uses are permitted in the Public Facilities Zone subject to the granting of a Conditional Use Permit pursuant to the provisions of Chapter 19.760 (Conditional Use Permit) of the Zoning Code:

1. Public buildings and associated grounds used for governmental and related purposes and activities
2. Public Educational institutions
3. Public Parks and Recreation facilities
4. Public rifle, pistol and archery ranges
5. Zoos, arboretums, wildlife preserves and similar uses
6. Water and sewage treatment plants
7. Utility substations
8. Power generation facilities
9. Government agency storage and maintenance yards
10. Public parking garages

Title 16—Building and Construction. Title 16 of the City's Municipal Code sets forth regulations for design, construction, quality of materials, use and occupancy, location and maintenance of buildings, equipment, structures, and grading for development within the City. This title also covers requirements for electrical work, plumbing, heating, cooling, and other equipment specifically regulated in the City. Title 16 provides minimum standards for the safety of buildings and building construction within the City, in order to protect life and property. The project would be required to meet all applicable provisions of Title 16.

Title 17—Grading Code. Title 17 of the City's Municipal Code sets forth regulations for grading projects. Compliance with these regulations helps minimize erosion, dust, water runoff, effects to natural landforms, and construction equipment emissions. The project would be required to meet the applicable provisions of Title 17.

Title 20—Cultural Resources. Title 20 of the Municipal Code provides guidelines for preserving, protecting, restoring, and rehabilitating historical and cultural resources within the City in order to maintain and encourage appreciation of its history and culture, improve the quality of the City's built environment, maintain the character and identity of its communities, and enhance the local economy through historic preservation.

Regional Housing Needs Assessment

The City of Riverside adopted a mid-cycle update on the Housing Element of the General Plan. The General Plan was adopted in October 10, 2017, in anticipation of population growth of a projected population growth to 383,077 people at ultimate buildout (City of Riverside 2018). In conjunction with the update, a Candidate Rezone Site Booklet was released that identified vacant and underutilized parcels for rezoning to multiple-family or higher densities to increase housing opportunities within the City. The Housing Element Update involves rezoning and General Plan amendments for as many as 395 acres (303 parcels), which exceeds the 191 acres required to be rezoned to meet the RHNA set by law and the SCAG.

Riverside Unified School District

The RUSD Facilities Planning and Development Department is charged with the critical task of evaluating the need for new and existing schools. This complex task is based on an ongoing analysis of RUSD's demographics, including projecting growth in the population of school age children from kindergarten through high school.

The Facilities Planning and Development Department's primary responsibilities include, but not limited to:

- Development and updating of the facilities master plan
- Design and planning for construction and modernization of schools
- Acquisition of sites for new schools
- Monitoring new development
- Review and evaluation of attendance boundaries
- Assess site enrollment capacity and site utilization

RUSD also prepared a Long Range Facilities Master Plan (LRFMP) in 2016 to provide a roadmap for future facilities planning within the School District. The LRFMP provides guidelines for both existing and future facilities decisions and includes schools, support centers, and undeveloped parcels for the next 15 to 20 years. The project site is not identified within the LRFMP (RUSD 2016).

Multiple Species Habitat Conservation Plan

The MSHCP is a comprehensive multi-jurisdictional effort that includes Riverside County and 14 cities in western Riverside County. Rather than address sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, proposing a reserve system of approximately 500,000 acres and a mechanism to fund and implement the reserve system. Most importantly, the MSHCP allows participating entities to issue take permits for listed species so that individual applicants need not seek their own permits from the United States Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW). The MSHCP was adopted on June 17, 2003 by the Riverside County Board of Supervisors (MSHCP Consistency Analysis 2012). The project site is subject to the MSHCP, but it is not located within an MSHCP criteria cell for any sensitive species.

3.6.3 - Methodology

To evaluate potential impacts related to land use and planning, FirstCarbon Solutions (FCS) conducted site reconnaissance, reviewed aerial photos, and reviewed applicability of land use policy documents. Photographs were also taken of the project site and surrounding land uses to document existing conditions. The City of Riverside General Plan 2025, and applicable community/redevelopment plans as well as RUSD's LRFMPs were reviewed to identify applicable policies and provisions that pertain to the project. The determination of consistency with applicable land use policies and ordinances is based upon a review of the previously identified planning and zoning documents that regulate land use or guide land use decisions pertaining to the project site. California Environmental Quality Act (CEQA) Guidelines Section 15125(d) requires that an Environmental Impact Report (EIR) discuss inconsistencies with applicable plans. A project is considered consistent with the provisions and general policies of an applicable City or regional land use plan if it is consistent with the overall intent of the plan and would not preclude the attainment of its primary goals.

3.6.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether land use and planning impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

3.6.5 - Project Impacts Mitigation Measures

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

Divide an Established Community

Impact LUP-1: The project would not disrupt or physically divide an established community.

Impact Analysis

The project site is within the boundaries of the RUSD and the jurisdictions of the City of Riverside in Riverside County. The City of Riverside General Plan 2025 designates the site as High Density Residential (HDR) with the current zoning designated as R-3-1500, which allows for Multiple-family Residential. The RUSD Board of Education has the discretion and legal authority to find the City's zoning inapplicable and develop an elementary school on the project site.[1] The physical division of an established community typically refers to the construction of a linear feature, such as an interstate highway or railroad tracks, or removal of a means of access, such as a local bridge that would impact mobility within an existing community or between a community and outlying area. The project site is located within a primarily residential area in the Casa Blanca Neighborhood in the City of Riverside on the northern side of Lincoln Avenue and Sonora Place. The RUSD proposes to construct a K-6 Elementary school campus that will have the capacity to serve up to 800 students in the community.

The proposed K-6 elementary school will accommodate students living within the easterly boundary of Mary Street, Victoria Avenue to the southeast, Jefferson Street to the southwest, and Indiana Street at the northwest boundary. Currently, elementary age students in the approximate 1.5 square mile Casa Blanca community are bused to attend one of six schools several miles away. This project would provide a single school for children in the Casa Blanca neighborhood to attend.

As discussed above, the project will provide a neighborhood school designed to provide high quality educational opportunities that will benefit the community and does not involve any features that divide the neighborhood, nor would the school remove any means of access or impact mobility. Therefore, the project will not physically divide an established community.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

[1] Government Code Section 53094(b) provides that the governing board of a "school district" by a two-thirds vote "may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district."

Level of Significance After Mitigation

Less than significant impact.

Conflict with Applicable Plans, Policies, or Regulations

Impact LUP-2:	**The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.**

Impact Analysis

Present Land Use

The project area is mostly undeveloped and consists of a square-shaped parcel totaling 9.8 acres. The project site is currently a vacant lot located in a relatively flat area that slopes gently to the northwest with no existing buildings or structures. It was formerly partially occupied by the KPRO 1570 AM transmitter building and four, approximately 125-foot-tall antenna towers on the central portion of the site and a small structure with an associated parking lot on the southern side of the site, which have now been demolished. According to historical aerial photographic research, the site was first developed as an AM radio station in the late 1960s.

Surrounding land uses include Church of Christ to the east, residential uses to the west and south, and a baseball field and community center to the north of the project site. Adjoining properties include: a single-family residential development on the south; a grass field, the SSgt. Salvador J. Lara Casa Blanca Public Library, and single-family residential development on the west, Lincoln Avenue Church of Christ on the east, and Villegas Park on the north and northeast.

Additionally, according to the Land Use and Urban Design Element, the City of Riverside adopted The Casa Blanca Community Plan in 1974 and updated in 1987 (City of Riverside 2018). The Community Plan recommendations include preserving and protecting the neighborhood's single-family character. To further encourage investment in the neighborhood, the City also adopted The Casa Blanca Redevelopment Area (amended in 2001) which encompasses almost the entire neighborhood as well as portions of Presidential Park and Riverside Auto Center to the southwest and a very small portion of the Victoria neighborhood on the northeast side of Mary Street. The overall purpose of the Plan was to preserve the neighborhood's roots as a citrus colonia established by Mexican immigrants during the City's agricultural heyday, the Casa Blanca neighborhood is known contemporarily for being family-oriented, strong-knit, and largely residential in character. Casa Blanca's residents and the City have invested significant effort to improve the physical and economic conditions in the neighborhood. Residents have organized themselves through several active community organizations, whose activities led to the creation of one of the City's first Community Plans in 1974. Both the Casa Blanca Community Plan and the Redevelopment Plan envision the preservation of the Casa Blanca neighborhood; however, any future development standards would be driven and consistent to the City of Riverside Municipal Code.

Proposed Land Use

The project proposes to construct a K-6 Elementary school campus, including the construction of three main buildings totaling approximately 100,500 square feet, outdoor recreation space, and three parking lots. This will result in a campus capacity of 800 students total. The project will provide a neighborhood school for the Casa Blanca area and is generally consistent with City of Riverside General Plan 2025 Objectives and Policies as detailed in Table 3.6-2.

The project is located in a R-3-1500 zone and designated by the City of Riverside General Plan 2025 as a HDR land use area. The HDR designation allows for a maximum of 29 du/acre or 18.6 persons/acre; the primary intent of the HDR designation is for multiple-family residential use. A tentative tract map for the construction of 210 dwelling units on the project site was approved by the City of Riverside Planning Commission on August 23, 2018. The RUSD Board of Education has the discretion and legal authority to find the City of Riverside's zoning inapplicable and develop an elementary school on the project site. Thus, the project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

Although the project is not specifically identified in the District's LRFMP, it is consistent with the guidelines for future facilities discussed in the LRFMP, including designing schools that are designed to provide 21st Century learning environments that incorporate safety features, sustainability, and technology.

In addition, the project is within the Casa Blanca Neighborhood Plan. The Casa Blanca Plan does not allow uses or structures by which appearance, traffic, smoke, glare, noise, odor, or similar factors would be incompatible with the surrounding areas or structures. Potential adverse impacts of the project that could affect land use compatibility with surrounding areas including air quality, biological resources, cultural resources, greenhouse gas emissions, noise, and public services impacts have been evaluated and found to be less than significant or less than significant with mitigation incorporated.

Table 3.6-2 below analyzes the project's consistency with the City of Riverside General Plan 2025. As shown below, the project would not conflict with any applicable General Plan policies adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts to the General Plan would be less than significant.

Table 3.6-2: City of Riverside General Plan Objectives and Policies Consistency Analysis

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
Land Use	Objective LU-43	Perpetuate the development and redevelopment of Casa Blanca as a single-family residential community, providing decent housing in a price range affordable for ownership by present residents and future families.	Consistent. The project does not conflict with this objective. The project supports the existing and future residential community by re-establishing an elementary school to serve the Casa Blanca Neighborhood., The project would eliminate the current need to bus students to schools outside the neighborhood.
	Policy LU-44.3	Continue improving the neighborhood's street system.	Consistent. The project conforms to this policy. Improvements would be made to the proposed internal circulation of the project in addition to the ingress/egress points along Lincoln Avenue.
	Objective LU-46	Provide modern, effective public support facilities within the Casa Blanca Neighborhood and establish a partnership between community representatives and the City to attain the Neighborhood's shared goals.	Consistent. The project conforms to this objective. The project would re-establish an elementary school within the neighborhood and as part of the Draft EIR noticing process, residents within the neighborhood are given the opportunity to comment on the project.
	Policy LU-46.2	Continue current efforts through the City's Office of Neighborhoods and Redevelopment Agency to solicit broad community input into City actions affecting the Casa Blanca Neighborhood.	Consistent. The project would give residents opportunity to provide comments on the project via the Draft EIR noticing process, a comment period of 30 days would provide adequate opportunity for community input. A scoping meeting for the project was held on November 14, 2018, to allow those interested to review and provide comments regarding the project.
Education	Objective ED-1	Accommodate the growth of all educational facilities.	Consistent. The project would provide a single neighborhood school for the existing students in Casa Blanca that are currently bussed to attend six separate schools. The project site is currently vacant and is surrounded by multiple vacant parcels. This would provide adequate growth opportunities for the proposed educational facilities.

Table 3.6-2 (cont.): City of Riverside General Plan Objectives and Policies Consistency Analysis

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
	Policy ED-1.1	Provide an adequate level of infrastructure and services to accommodate campus growth at all educational levels.	Consistent. The project is right sized to meet the expected student population based on current attendance at District schools**.** The project would construct a new K-6 elementary school campus within the Casa Blanca Neighborhood. The new facility would include: a 1-story 11,000 square foot multi-purpose/food service building, a 1-story 6,500 SF administration building, a 2-story 83,000 square foot building for several maker-space and traditional classrooms with a capacity to serve up to 800 students, a library, and collaborative areas totaling 100,500 square feet. In addition to the main buildings, the site proposes to include outdoor recreation space that consists of a 13,500 square foot kindergarten playground, 29,500 square foot quad and courtyard, 36,800 square foot hardcourts, 143,500 square foot playfields (baseball, basketball, and soccer fields), a 4,000 square foot Science Grow Lab, and associated landscaping totaling 240,870 square feet. In addition to associated parking lots.
	Policy ED-1.4	Streamline the permitting process for educational facilities as practicable.	Consistent. In order to construct a public school in this zone, the RUSD may exercise its legal authority to find the City's zoning inapplicable to the project site). Pursuant to Government Code 53094, the RUSD Board of Education is able to overrule the existing zoning by a two-thirds vote.
Source: City of Riverside General Plan 2025, Land Use and Urban Design Element, 2018. City of Riverside General Plan 2025 Education Element, 2007.			

Further, the California legislature granted school districts the power to exempt school property from county and city zoning requirements, provided the school district complies with the terms of Government Code Section 53094. RUSD may overrule the City's General Plan zoning by majority vote per Government Code Section 53094. Alternatively, implementation of a GPA and RZ sought for the project with the City would not conflict with any adopted land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. As such, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Conflict with Conservation Plans

Impact LUP-3:	**The project would conflict with any applicable habitat conservation plan or natural communities conservation plan.**

Impact Analysis

As discussed in Section 3.4, Biological Resources, FCS conducted a project-specific Biological Resources Assessment on August 29, 2018, and found the project site falls within the boundaries of the Rough Step 1 of the Western Riverside MSHCP. The species protected under the Western Riverside MSHCP have the potential to occur on-site based on suitable habitat. Accordingly, in August 2018, a MSHCP Consistency Analysis was conducted for the project. Based on the results of the MSHCP Consistency Analysis, the species protected under the Western Riverside MSHCP that have the potential to occur on site based on suitable habitat include: the burrowing owl, Swainson's hawk, western mastiff bat, and the western yellow bat. As such, Mitigation Measure (MM) LUP-3a through MM-LUP-3c would be enacted if these species are found to be present on site. The fees regarding the project development will be calculated at a rate of $7,164 per acre. With the mitigation measures in place, the project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. Therefore, the project complies with the MSHCP and would not conflict with any applicable habitat conservation plan or natural community conservation plan.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of MM-BIO-1: Migratory and Nesting Birds.

Implementation of MM BIO-2: Migratory and Nesting Bats.
Implementation of MM-BIO-3: Burrowing Owl.

Level of Significance After Mitigation

Less than significant impact with mitigation measures incorporated.

3.7 - Noise

3.7.1 - Introduction

This section describes the existing noise setting and potential effects from project implementation on noise in the project area and vicinity. Descriptions and analysis in this section are based on noise modeling performed by FirstCarbon Solutions (FCS) (2018). The noise modeling output is included in this EIR as Appendix F.

3.7.2 - Environmental Setting

Fundamentals of Noise

Noise is usually defined as unwanted sound. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are typically, only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness. Only audible changes in existing ambient or background noise levels are considered potentially significant as described more fully below, pursuant to applicable noise standards.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level. Noise levels diminish or attenuate as distance from the source increases based on an inverse square rule, depending on how the noise source is physically configured. Noise levels from a single-point source, such as a single piece of construction equipment at ground level, attenuate at a rate of 6 dB for each doubling of distance (between the single-point source of noise and the noise-sensitive receptor of concern). Heavily traveled roads with few gaps in traffic behave as continuous line sources and attenuate roughly at a rate of 3 dB per doubling of distance.

Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Table 3.7-1 shows some representative noise sources and their corresponding noise levels in dBA.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound, including during sensitive times of the day and night. The predominant rating scales in the State of California are the equivalent continuous sound level (L_{eq}), the day-night average level (L_{dn}) based on dBA, and the community noise equivalent level (CNEL). The L_{eq} is the total sound energy of time-varying noise over a sample period. The L_{dn} is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 10 decibels to sound levels at night between 10:00 p.m. and 7:00 a.m. The CNEL is similar to the L_{dn}, except that it has another

addition of 4.77 dB to sound levels during the evening hours between 7:00 p.m. and 10:00 p.m. These additions are made to the sound levels during evening and nighttime hours because there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds compared with daytime hours. Many local jurisdictions rely on the CNEL noise standard to assess transportation-related impacts on noise-sensitive land uses.

Table 3.7-1: Typical A-Weighted Noise Levels

Indoor Noise Source	Noise Level (dBA)	Outdoor Noise Sources
(Threshold of Hearing in Laboratory)	0	—
Library	30	Quiet Rural Nighttime
Refrigerator Humming	40	Quiet Suburban Nighttime
Quiet Office	50	Quiet Urban Daytime
Normal Conversation at 3 feet	60	Normal Conversation at 3 feet
Vacuum Cleaner at 10 feet	70	Gas Lawn Mower at 100 feet
Hair Dryer at 1 foot	80	Freight Train at 50 feet
Food Blender at 3 feet	90	Heavy-duty Truck at 50 feet
Inside Subway Train (New York)	100	Jet Takeoff at 2,000 feet
Smoke Detector Alarm at 3 feet	110	Unmuffled Motorcycle
Rock Band near stage	120	Chainsaw at 3 feet
—	130	Military Jet Takeoff at 50 feet
—	140	(Threshold of Pain)
Source: Compiled by FCS 2014.		

Noise standards in terms of percentile exceedance levels, L_n, are often used together with the maximum noise level (L_{max}) for noise enforcement purposes. When specified, the percentile exceedance levels are not to be exceeded by an offending sound over a stated time period. For example, the L_{10} noise level represents the level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level (which means that the noise level exceeds the L_{50} noise level half of the time, and is less than this level half of the time). The L_{90} noise level represents the noise level exceeded 90 percent of the time, and is considered the lowest noise level experienced during a monitoring period. The L_{90} noise level is normally referred to as the background noise level. For a relatively steady noise, the measured L_{eq} and L_{50} are approximately the same.

When assessing the annoyance factor, other noise rating scales of importance include the L_{max}, which is the highest exponential time averaged sound level that occurs during a stated time period. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Construction Noise Fundamentals

Construction is performed in discrete steps or phases, each of which has its own mix of equipment, and consequently, its own noise characteristics. Typical phases of construction include demolition, excavation, grading, and building construction. These various concurrent and sequential phases would change the character of the noise generated on each construction site and, therefore, would change the noise levels as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Construction-period noise levels are higher than background ambient noise levels, but eventually cease once construction is complete. Table 3.7-2 shows typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

Table 3.7-2: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Pickup Truck	55
Pumps	77
Air Compressors	80
Backhoe	80
Front-End Loaders	80
Portable Generators	82
Dump Truck	84
Tractors	84
Auger Drill Rig	85
Concrete Mixer Truck	85
Cranes	85
Dozers	85
Excavators	85
Graders	85
Jackhammers	85
Man Lift	85
Paver	85
Pneumatic Tools	85
Rollers	85
Scrapers	85
Concrete/Industrial Saws	90
Impact Pile Driver	95

Table 3.7-2 (cont.): Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Vibratory Pile Driver	95
Source: FHWA 2006.	

Groundborne Vibration Fundamentals

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as root mean square (RMS) velocity in units of decibels of 1 micro-inch per second. To distinguish these vibration levels referenced in decibels from noise levels referenced in decibels, the unit is written as "VdB."

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving and operating heavy earthmoving equipment. However, construction vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). For purposes of this analysis, project-related impacts are expressed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 3.7-3.

Table 3.7-3: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer (small)	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82

Table 3.7-3 (cont.): Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Crane (mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer (large)	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam Shovel Drop	0.202	94
Vibratory Roller (large)	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112
Source: Compilation of scientific and academic literature, generated by FTA and FHWA.		

Propagation of vibration through soil can be calculated using the vibration reference equation of

$$PPV = PPV\ ref * (25/D)^n\ (in/sec)$$

Where:

PPV = reference measurement at 25 feet from vibration source
D = distance from equipment to property line
n= vibration attenuation rate through ground

According to Chapter 12 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA 2006), an “n” value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.

Existing Ambient Noise Levels

The existing noise levels on the project site were documented through a noise monitoring effort performed at the project site. Three short-term noise measurements (15 minutes each) were taken on Tuesday, August 14, 2018, starting at 10:30 a.m. and ending at 11:55 p.m., during the midday peak noise hour.

The first short-term measurement, ST-1, was taken at the southern corner of the project site, on Bunker Street and Lincoln Avenue, which is located between a proposed parking lot and residential homes. The resulting measurement showed that ambient noise levels at this location averaged 63.1 dBA L_{eq}. As was observed by the technician at the time of the noise measurement, the dominant noise source in the project vicinity was from vehicular traffic along Lincoln Avenue.

The second short-term measurement, ST-2, was taken at the southwestern boundary of the project site, on Bunker Street, which is located between proposed hardcourts and residential homes. The resulting measurement showed that ambient noise levels at this location averaged 49.1 dBA L_{eq}. As was observed by the technician at the time of the noise measurement, the dominant noise source in the project vicinity was a car engine.

The third short-term measurement, ST-3, was taken near the eastern corner of the project site, approximately 130 feet northwest of Lincoln Avenue and 180 feet southwest of Dorlen Street. The resulting measurement showed that ambient noise levels at this location averaged 51.1 dBA L_{eq}. As was observed by the technician at the time of the noise measurement, the dominant noise sources in the project vicinity were vehicular traffic along Lincoln Avenue, birds, dogs, and a garbage truck.

The ambient noise measurement locations are shown in Exhibit 5 of the Noise Impact Analysis. The noise monitoring survey data sheets are provided in Appendix F.

Existing Traffic Noise Levels

Existing traffic noise levels along the roadway segments adjacent to the project site were modeled using the Federal Emergency Management Agency (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108). Site-specific information is entered, such as roadway traffic volumes, roadway active width, source-to-receiver distances, travel speed, noise source and receiver heights, and the percentages of automobiles, medium trucks, and heavy trucks that the traffic is made up of throughout the day, amongst other variables. The daily traffic volumes were obtained from the traffic analysis prepared for the project by Linscott, Law & Greenspan, Engineers (LLG 2018). The traffic volumes described here correspond to the existing without project conditions traffic scenario as described in the transportation analysis. The model inputs and outputs—including the 60 dBA, 65 dBA, and 70 dBA CNEL noise contour distances—are provided in Appendix F. A summary of the modeling results is shown in Table 3.7-4.

Table 3.7-4: Existing Traffic Noise Levels

Roadway Segment	CNEL (dBA) 50 feet from Centerline of Outermost Lane				
	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Lincoln Avenue—Sonora Place to Collingwood Street	5,600	< 50	< 50	72	61.7
Lincoln Avenue—Collingwood Street to Dorlen Street	5,400	< 50	< 50	71	61.5

Table 3.7-4 (cont.): Existing Traffic Noise Levels

Roadway Segment	CNEL (dBA) 50 feet from Centerline of Outermost Lane				
	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane

Notes:
[1] Modeling results do not take into account mitigating features such as topography, vegetative screening, fencing, building design, or structure screening. Rather, they assume a reasonable worst-case of having a direct line of site on flat terrain.
[2] ADT = Average Daily Traffic
Source: FCS 2018.

The modeling results show that traffic noise levels on roadway segments adjacent to the project site range up to 63.1 dBA CNEL as measured at 50 feet from the centerline of the outermost travel lane.

Existing Stationary Source Noise Levels

Some of the surrounding land uses generate noise associated with mechanical ventilation systems, parking lot activities, and recreational activities at the adjacent park land use. Noise levels from typical rooftop mechanical ventilation equipment are anticipated to range up to approximately 60 dBA L_{eq} at a distance of 25 feet. Typical parking lot activities, such as people conversing or closing doors, generate approximately 60 dBA to 70 dBA L_{max} at 50 feet. These activities are potential point sources of noise that contribute to the existing ambient noise environment in the project vicinity.

3.7.3 - Regulatory Setting

Federal Regulations

United States Environmental Protection Agency

In 1972, Congress enacted the Noise Control Act. This act authorized the United States Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels) categories, as shown in Table 3.7-5. The EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dBA. The EPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

Table 3.7-5: Summary of EPA Recommended Noise Levels to Protect Public Welfare

Effect	Level	Area
Hearing loss	$L_{eq(24)} \leq 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities, such as schools, etc.

Note:
$_{(24)}$ = L_{eq} duration of 24 hours
Source: EPA 1974.

Federal Transit Administration

The FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment document (FTA 2006). The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 3.7-6.

Table 3.7-6: Federal Transit Administration Construction Vibration Impact Criteria

Building Category	PPV (in/sec)	Approximate VdB
I. Reinforced—Concrete, Steel or Timber (no plaster)	0.5	102
II. Engineered Concrete and Masonry (no plaster)	0.3	98
III. Non Engineered Timber and Masonry Buildings	0.2	94
IV. Buildings Extremely Susceptible to Vibration Damage	0.12	90

Note:
VdB = velocity in decibels
Source: FTA 2006.

State Regulations

The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. Referred to as the “State Noise Insulation Standard,” it requires buildings to meet performance standards through design and/or building materials that would offset any noise source in the vicinity of the receptor. State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-

family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are found in the California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. The project is a school development project, and does not include the development of any of these multi-family type land use developments, so these regulations do not apply.

The State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses. The City of Riverside has modified these guidelines as described below.

Local Regulations

The project site is located within the City of Riverside, in the County of Riverside. The City of Riverside addresses noise in the Noise Element of its General Plan (City of Riverside 2007) and in its Municipal Code (City of Riverside 2018).

City of Riverside General Plan 2025

The City of Riverside adopted its General Plan in November of 2007. The objective of the General Plan's Noise Element is to minimize the exposure of new residential development, schools, hospitals and similar noise-sensitive uses to excessive or unhealthy noise levels to the greatest extent possible. To assist with meeting its objective, the City of Riverside General Plan 2025 establishes Noise/Land Use Noise Compatibility Criteria guidelines for noise in Figure N-10 (shown in Exhibit 4 of the Noise Impact Analysis) of its Noise Element. These guidelines are summarized below:

The land use category listed in the City's Noise/Land Use Noise Compatibility Criteria guidelines that most closely applies to the project is schools, libraries, churches, hospitals, and nursing homes. Under this designation, noise environments up to 60 dBA CNEL are considered "normally acceptable" for this type of new land use development. While, environments with ambient noise levels ranging from 60 dBA to 70 dBA CNEL are considered "conditionally unacceptable" for this type of land use development; as such, development should only be undertaken after a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

City of Riverside Municipal Code

The City of Riverside establishes its noise performance standards in the noise ordinances of the Municipal Code. The noise ordinances applicable to the project are summarized below.

Exterior Sound Level Limits (Section 7.25.010)

The City's performance standard for exterior sound levels limits noise at residential properties to 55 dBA L_{eq} from 7:00 a.m. to 10:00 p.m. and 45 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. Furthermore, it is unlawful for any person to create noise, when measured at an affected residential property line, which causes the sound level to exceed:

1. The exterior noise standard, up to 5 dBA, for a cumulative period of more than 30 minutes in any hour; or

2. The exterior noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or
3. The exterior noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour; or
4. The exterior noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour; or
5. The exterior noise standard plus 20 dBA for any period of time.

According to the City's exterior noise standard, if a measured ambient noise level exceeds that permissible within any of the first four noise limit categories above, the allowable noise exposure standard shall be increased in five decibel increments in each category as appropriate to encompass the ambient noise level.

Interior Sound Level Limits (Section 7.30.015)

Interior noise levels in residential dwellings are limited to 45 dBA L_{eq} from 7:00 a.m. to 10:00 p.m. and to 35 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. Furthermore, it is unlawful for any person to create noise, when measured on any residential property, which causes the sound level to exceed:

1. The noise standard, up to 5 dBA, for a cumulative period of more than 5 minutes in any hour; or
2. The noise standard plus 5 dBA for a cumulative period of more than 1 minute in any hour; or
3. The noise standard plus 10 dBA for any period of time.

In the event the ambient noise level exceeds the noise limit categories above, the cumulative period applicable to said category shall be increased to reflect the ambient noise level.

General Noise Regulations (Section 7.35.010)

Other applicable standards pertain to noise levels generated by project-related construction, loading, and unloading activities. According to the City's noise ordinances, operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, grading or demolition work between the hours of 7:00 p.m. and 7:00 a.m. on weekdays and between 5:00 p.m. and 8:00 a.m. on Saturdays or at any time on Sunday or federal holidays is prohibited.

3.7.4 - Methodology

Noise Measurement Methodology

The noise measurements were taken using Larson-Davis Model LxT2 Type 2 precision sound level meters programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 150. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National

Bureau of Standards. All noise level measurement equipment meets American National Standards Institute specifications for sound level meters (S1.4 1983 identified in Chapter 19.68.020.AA).

Traffic Noise Modeling Methodology

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. Traffic data used in the model was obtained from the W-Trans Traffic Impact Study prepared for the project (Appendix H). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the CNEL values. The FHWA-RD-77-108 Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level. Adjustments are then made to the reference energy mean emission level to account for the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway); the total average daily traffic (ADT); and the percentage of ADT that flows during the day, evening, and night; the travel speed; the vehicle mix on the roadway; a percentage of the volume of automobiles, medium trucks, and heavy trucks; the roadway grade; the angle of view of the observer exposed to the roadway; and the site conditions ("hard" or "soft") as they relate to the absorption of the ground, pavement, or landscaping.

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of traffic noise levels, a doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the FHWA community noise assessment criteria, this change is "barely perceptible." For reference, a doubling of perceived noise levels would require an increase of approximately 10 dBA. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

The model analyzed the noise impacts from the nearby roadways onto the project vicinity, which consists of the area that has the potential of being impacted from the on-site noise sources as well as the project-generated traffic on the nearby roadways. The roadways were analyzed based on a single-lane-equivalent noise source combining both directions of travel. A single-lane-equivalent noise source exists when the vehicular traffic from all lanes is combined into a theoretical single lane that has a width equal to the distance between the two outside lanes of a roadway, which provides almost identical results to analyzing each lane separately where elevation changes are minimal.

3.7.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the California Environmental Quality Act (CEQA) Guidelines, noise impacts resulting from the implementation of the project would be considered significant if the project would cause:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

3.7.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Noise Levels in Excess of Standards

Impact NOI-1:	**The project would not potentially expose persons to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies.**

Impact Analysis

A significant impact would occur if implementation of the project would expose persons working or residing at the project site or in the project vicinity to noise levels in excess of established standards.

The City of Riverside General Plan 2025 indicates that for schools, libraries, churches, hospitals, and nursing home land use developments, environments with ambient noise levels ranging up to 60 dBA CNEL are considered “normally acceptable.” While environments with ambient noise levels ranging from 60 dBA to 70 dBA CNEL are considered “conditionally acceptable.”

The City’s noise ordinance establishes exterior and interior noise performance standards for receiving residential land uses:

- Exterior noise levels at receiving residential property lines shall not exceed 55 dBA L_{eq} from 7:00 a.m. to 10:00 p.m. and 45 dBA L_{eq} from 10:00 p.m. to 7:00 a.m.
- Interior noise levels in residential dwellings shall not exceed 45 dBA L_{eq} from 7:00 a.m. to 10:00 p.m. and 35 dBA L_{eq} from 10:00 p.m. to 7:00 a.m.

Stationary Source Operational Noise Impacts

Mechanical Equipment Operations

Implementation of the project would include operation of a new stationary noise source of mechanical equipment to support the new classrooms. At the time of preparation of this analysis, specific details of mechanical ventilation systems were not available; therefore, a reference noise level for typical rooftop mechanical ventilation systems was used. Noise levels from typical commercial-grade mechanical ventilation equipment systems range up to approximately 60 dBA L_{eq} at a distance of 25 feet. The closest off-site sensitive receptors to the nearest possible location where this equipment could be located are the residences located to the southeast of the project site. These residences are located approximately 180 feet from the closest possible location for project mechanical ventilation equipment. At this distance these nearest residential receptors would be exposed to mechanical ventilation system operational noise levels of approximately 43 dBA L_{eq}. Therefore, noise generated by project mechanical ventilation equipment would be well be below the City's residential daytime and nighttime noise standards of 55 dBA L_{eq} and 45 dBA L_{eq}, respectively, for stationary noise sources. Therefore, noise impacts from project mechanical ventilation equipment would be less than significant.

Parking Lot Activities

Typical parking lot activities such as people conversing, doors slamming, or vehicles idling generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet. The closest noise-sensitive land use to the proposed parking areas is the residential land uses southeast of the project site across Bunker Street, located approximately 70 feet from the nearest acoustic center of parking lot activity. At this distance, maximum noise levels from parking lot activities could range up to approximately 57 dBA to 67 dBA L_{max} at this receptor. These activities would be expected to occur sporadically throughout the day, as visitors and staff arrive and leave the parking lot areas. As a result, although there would be occasional high single-event noise exposure of up to 67 dBA L_{max} from parking lot activities, such activities when averaged over an hour or longer period would result in average noise levels of less than 50 dBA L_{eq}. Use of the parking lot would only occur during the schools operational hours and would therefore not occur during nighttime hours or on weekends. Therefore, noise generated by parking lot activities would be well be below the City's residential daytime and nighttime noise standards of 55 dBA L_{eq} and 45 dBA L_{eq}, respectively, for stationary noise sources. Therefore, noise impacts from project parking lot activities would be less than significant.

Mobile Source Noise Impacts to On-Site Receptors

A significant impact would occur if persons working, visiting, or residing at the project site would be exposed to transportation noise levels that would exceed the City's normally acceptable land use compatibility threshold of up to 60 dBA CNEL for the proposed school land use developments.

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate existing and future traffic noise conditions along roadway segments adjacent to the project site. The projected future traffic noise levels adjacent to the project site were analyzed to determine compliance with the City's noise and land use compatibility standards. The daily traffic volumes were obtained from the traffic analysis prepared for the project by Linscott, Law & Greenspan, Engineers

(LLG 2018). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the CNEL values. The traffic noise modeling input and output files are included in Appendix H. Table 3.7-7 shows a summary of the traffic noise levels for existing and year 2040 buildout conditions without and with the project as measured at 50 feet from the centerline of the outermost travel lane.

Table 3.7-7: Traffic Noise Model Results Summary

Roadway Segment	Existing + No Project (dBA) CNEL	Existing + Project (dBA) CNEL	Increase over Existing + No Project (dBA)	Year 2040 No Project (dBA) CNEL	Year 2040 + Project (dBA) CNEL	Increase over Year 2040 No Project (dBA)
Lincoln Avenue—Sonora Place to Collingwood Street	60.1	60.6	0.5	61.1	61.5	0.4
Lincoln Avenue—Collingwood Street to Dorlen Street	59.9	60.4	0.5	61.1	61.3	0.2
Source: FCS 2018.						

The traffic noise model results show that projected traffic noise levels along Lincoln Avenue adjacent to the project site would range up to 60.6 dBA CNEL as measured at 50 feet from the centerline of the nearest travel lane under existing plus project conditions; and up to 61.5 dBA CNEL under year 2040 plus project conditions. The closest façade of the proposed school buildings would be located approximately 80 feet from the centerline of the roadway. At this distance the highest projected traffic noise levels would attenuate to below 58.5 dBA CNEL. These noise levels are within the City's normally acceptable range for new school land use developments. Therefore implementation of the project would not expose persons to traffic noise levels in excess of established standards and traffic noise impacts to the project would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Groundborne Vibration Impacts

Impact NOI-2: The project would not expose persons to generation of excessive groundborne vibration or groundborne noise levels.

Impact Analysis

This section analyzes both construction and operational groundborne vibration impacts. Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving, and operating heavy earthmoving equipment.

The City of Riverside has not adopted a provision addressing the impacts of groundborne vibration levels. Therefore, for purposes of this analysis, the FTA vibration impact criteria are utilized. The FTA has established industry accepted standards for vibration impact assessment in its Transit Noise and Vibration Impact Assessment document (FTA 2006). These guidelines are summarized in Table 3.7-6.

Short-term Construction Vibration Impacts to Off-site Receptors

A significant impact would occur if existing structures at the project site or in the project vicinity would be exposed to groundborne vibration levels in excess of levels established by the FTA's Construction Vibration Impact Criteria for the listed type of structure, as shown in Table 3.7-6.

Of the variety of equipment used during construction, the small vibratory rollers that are anticipated to be used in the site preparation phase of construction would produce the greatest groundborne vibration levels. Small vibratory rollers produce groundborne vibration levels ranging up to 0.101 inch per second (in/sec) PPV at 25 feet from the operating equipment.

The nearest off-site receptors to the project site are the single-family residential homes located near the southwest boundary of the project site on Bunker Street. The closest of these homes would be located approximately 40 feet from the nearest construction footprint where the heaviest construction equipment would potentially operate. At this distance, groundborne vibration levels would range up to 0.05 PPV from operation of the types of equipment that would produce the highest vibration levels. This is below the FTA's Construction Vibration Impact Criteria of 0.2 PPV for buildings of non-engineered timber and masonry. Therefore, the impact of groundborne vibration levels on off-site receptors would be less than significant.

Operational Vibration Impacts

Implementation of the project would not include any permanent sources that would expose persons in the project vicinity to groundborne vibration levels that could be perceptible without instruments at any existing sensitive land use in the project vicinity. In addition, there are no existing significant permanent sources of groundborne vibration in the project vicinity to which the project would be

exposed. Therefore, project operational groundborne vibration level impacts would be considered less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Substantial Permanent Increase Impacts

Impact NOI-3:	**The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**

Impact Analysis

A significant impact would occur if implementation of the project would result in a substantial increase in ambient noise levels compared with noise levels existing without the project. As noted in the characteristics of noise discussion, audible increases in noise levels generally refer to a change of 3 dBA or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. A change of 5 dBA is considered the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, an increase of 5 dBA or greater would be considered a substantial permanent increase in ambient noise levels.

Traffic Noise Increase

As shown in Table 3.7-7, the greatest increase in traffic noise levels that would result from implementation of the project would be an increase of 0.5 dBA compared to noise levels that would exist without the project. This increase would not be perceptible and would be well below the threshold of a 5 dBA increase that would be considered a substantial permanent increase. Therefore, project-related traffic levels would not result in a substantial permanent increase in ambient noise levels.

Stationary Source Noise Increase

Based on the analysis shown in Impact NOI-1 above, parking lot activities could result in noise levels ranging up to approximately 37 dB L_{eq}, at the nearest residences. Mechanical ventilation system operational noise levels could range up to approximately 43 dBA L_{eq} as measured at the nearest residential receptor. These levels are below the existing noise levels in the project vicinity as documented by the ambient noise monitoring and the traffic noise modeling results. Therefore, project-related parking lot activities and mechanical equipment operation would not result in a substantial permanent increase in ambient noise levels.

Implementation of the project would also include recreational activities by school children on the proposed hardcourt and play field areas. Noise levels from these activities would be similar to existing noise levels from activities at the adjacent public park, located immediately north of the project site.

However, school activities would only occur during school hours and not during evening or nighttime hours, when major use of the public park would occur. Since the school recreational activities would not occur during the same time period of when major use of the public park would occur, they would not result in a doubling of this noise source. Therefore, noise generated by recreational activities would not result in even a 3 dBA increase in ambient noise levels compared to existing noise levels experienced in the project vicinity from current recreational activity at the adjacent public park. Therefore, noise impacts from project recreational activities would be less than significant.

Therefore, project-related stationary sources would not result in a substantial permanent increase of (3 dBA or greater) compared with noise levels existing without the project, and noise impacts to off-site sensitive receptors would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Substantial Temporary Increase Impacts

Impact NOI-4:	**The project would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**

Impact Analysis

A significant impact would occur if project construction would result in temporary or periodic increases in ambient noise levels that would result in an adverse health impact of annoyance or sleep disturbance at nearby sensitive receptors.

Two types of short-term noise impacts could occur during the construction of the project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project site. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance, the effect on longer-term (hourly or daily) ambient noise levels would be small. Therefore, short-term construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment,

similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table 3.7-1 lists typical construction equipment noise levels, based on a distance of 50 feet between the equipment and a noise receptor. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings. Impact equipment such as pile drivers are not expected to be used during construction of this project.

The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery and compacting equipment, such as bulldozers, draglines, backhoes, front loaders, roller compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three or four minutes at lower power settings.

The construction that would take place during this project would likely require the use of scrapers, bulldozers, water trucks, haul trucks, and pickup trucks. The maximum noise level generated by each scraper is assumed to be 85 dBA L_{max} at 50 feet from this equipment. Each bulldozer would also generate 85 dBA L_{max} at 50 feet. The maximum noise level generated by graders is approximately 85 dBA L_{max} at 50 feet. Each doubling of sound sources with equal strength increases the noise level by 3 dBA. Assuming that multiple pieces of the loudest pieces of construction equipment all operate simultaneously at full power within 50 feet of a single point (the acoustic center of these various noise sources) would produce a reasonable worst-case combined noise level during the loudest phase of construction of up to 90 dBA L_{max}. Assuming that these multiple pieces of equipment would all operate simultaneously in those same locations for a full hour would result in a reasonable worst-case hourly average of 86 dBA L_{eq}. The acoustical center reference is used because construction equipment must operate at some distance from one another on a project site (they cannot all operate simultaneously at a single point), and the combined noise level as measured at a point equidistant from the sources (acoustic center) would be the worst-case maximum noise level.

The closest noise-sensitive receptors to the project site are the single-family residential homes located near the southwest boundary of the project site on Bunker Street. The façade of the closest home would be located approximately 90 feet from the acoustic center of construction activity where multiple pieces of heavy construction equipment would operate simultaneously during construction of the proposed sports fields. At this distance, construction noise levels could range up to approximately 84.9 dBA L_{max}, with a relative worst-case hourly average of 80.9 dBA L_{eq} at this receptor.

Although there could be a relatively high single event noise exposure potential causing an intermittent noise nuisance, the effect on longer-term (hourly or daily) ambient noise levels would be small but could result in an adverse health impact of annoyance or sleep disturbances at nearby sensitive receptors. However, compliance with the permissible construction hours established by the City's Municipal Code would reduce the effects of noise produced by construction activities on longer-term (hourly or daily) ambient noise levels, and it would reduce potential impacts that could result in annoyance or sleep disturbances at nearby sensitive receptors. Therefore, implementation of Mitigation Measure (MM) NOI-1, restricting the permissible hours of construction and

implementing best management noise reduction techniques and practices, would reduce impacts from temporary increases in ambient noise levels due to construction activity to less than significant. Therefore, the potential short-term construction noise impacts on sensitive receptors in the project vicinity would be reduced to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-4 Implementation of the following multi-part mitigation measure is required to reduce potential construction period noise impacts:

- The construction contractor shall ensure that all equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
- The construction contractor shall ensure that unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes) is prohibited.
- The construction contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists.
- At all times during project grading and construction, the construction contractor shall ensure that stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from adjacent residences.
- The construction contractor shall ensure that the construction staging areas shall be located to create the greatest feasible distance between the staging area and noise-sensitive receptors nearest the project site.
- The construction contractor shall ensure that all on-site construction activities, including the operation of any tools or equipment used in construction, drilling, repair, alteration, grading or demolition work, do not commence between the hours of 7:00 p.m. and 7:00 a.m. on week days and between 5:00 p.m. and 8:00 a.m. on Saturdays or at any time on a Sunday or federal holidays.

Level of Significance After Mitigation

Less than significant impact.

Public Airport Noise Impacts

Impact NOI-5:	**The project would not expose people residing or working at the project site to excessive noise levels due to its location within an airport land use plan.**

Impact Analysis

The nearest airport to the project site is the Riverside Municipal Airport that is located 2.7 miles northwest of the project site. Because of its distance from the airports runways, the project site is located well outside of the airport’s 55 dBA CNEL noise contours. Therefore, implementation of the

project would not expose persons residing, working or visiting the project site to excessive noise levels associated with public airport noise. No impacts associated with public airport noise would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Private Airstrip Noise Impacts

Impact NOI-6:	**The project would not expose people residing or working at the project site to excessive noise levels because of its location within the vicinity of a private airstrip.**

Impact Analysis

No private airstrip is located within 2 miles of the project site. Because of its distance from any private airstrips, the project would not expose persons residing, working or visiting the project site to excessive noise levels associated with private airstrip noise. No impacts associated with private airstrip noise would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

3.8 - Public Services

3.8.1 - Introduction

This section describes the existing public services and potential effects from project implementation on public services. The information contained in this section was collected from local public agencies and County departments. Other relevant public service data was assembled through official websites, email, and correspondence.

Descriptions and analysis in this section are based on information provided by personal communication from representatives from the Riverside Public Library, Riverside Fire Department, Riverside Police Department, and Riverside Parks, Recreation, and Community Development.

3.8.2 - Existing Conditions

Fire Services

To understand the existing fire protection services setting in the project area and whether implementation of the project could potentially impact existing fire protection facilities in Riverside, Fire Chief Michael Moore of the Riverside Fire Department was contacted via email on September 26, 2018.

The Riverside Fire Department provides fire protection and emergency response services in the City of Riverside. The City of Riverside has 14 fire stations throughout the City. The station closest to the project site is Fire Station No. 10 located at 2590 Jefferson Street, approximately 0.85 mile southwest of the project site (City of Riverside 2018). Other Riverside fire stations located near the project site include Fire Stations No. 3, No. 5, and No. 9. Table 3.8-1 lists all fire stations in the City of Riverside, and Table 3.8-2 lists the stations closest to the site. Since the 1880s, the Riverside Fire Department has grown from a volunteer only group to a working fire department made up of 220 uniformed firefighters, six state-certified Fire Inspectors, two Plan Checker Engineers, a Public Information Representative, and additional support staff (City of Riverside 2018).

There are six divisions within the Riverside Fire Department: Fire Prevention, Operations, Administration, Special Services, Urban Search, and Rescue Training. Riverside Fire Department utilizes a highly trained workforce in addition to responsible fiscal management and progressive technology to provide the best service to its community (City of Riverside General Plan 2025).

The operations division of the Riverside Fire Department responds to over 30,000 emergency calls annually (City of Riverside General Plan 2025). Calls last for approximately 6 minutes on average, while response times take about 7 minutes over 70 percent of the time. A goal of the community is to provide high-level service over the long term. The Operations Team is skilled in both Basic and Advanced Life Support services, Technical Rescue, Heavy Rescue, Water Surface Rescue, and Hazardous Materials Response specialties (City of Riverside 2018).

Mutual and automatic aid is provided to the City of Riverside's immediate neighbors and communities throughout the State through the California Emergency Management Act mutual aid system (City of Riverside 2018).

A response to the service letter email was received on September 27, 2018, from Fire Marshal Jennifer McDowell on behalf of Fire Chief Moore. According to Fire Marshal McDowell, average response times for the Riverside Fire Department are approximately 7.8 minutes, and typically, a total of 16 response personnel initially respond to first alarm assignments, including one Battalion Chief. There are a minimum of four individuals at each of the 14 fire stations (McDowell, personal communication, September 2018).

According to Fire Marshal McDowell, concerns related to response times are nonexistent and no challenges are anticipated at this time. Call volume is based on occupancy use, and the estimated number of annual calls for service resulting from the project is unknown at this time (Fire Marshal McDowell, personal communication).

All divisions are supported by a civilian staff of 23 personnel, including an Administrative Services Manager, Emergency Services Administrator, Emergency Medical Services Coordinator, six state-certified Fire Safety Inspectors, two Plan Check Engineers, and 12 support staff (2017 Fire Strategic Plan).

Table 3.8-1: Fire Station Locations

Station Number	Station Name	Station Address
Station 1	Downtown/Fire Administration	3401 University Avenue, Riverside, CA
Station 2	Arlington	9449 Andrew Street, Riverside, CA
Station 3	Magnolia Center (Midtown)	6395 Riverside Avenue, Riverside, CA
Station 4	University	3510 Cranford Avenue, Riverside, CA
Station 5	Airport	5883 Arlington Avenue, Riverside, CA
Station 6	Northside	1077 Orange Street, Riverside, CA
Station 7	Arlanza	10191 Cypress Avenue, Riverside, CA
Station 8	La Sierra	11076 Hole Avenue, Riverside, CA
Station 9	Mission Grove	6674 Alessandro Boulevard, Riverside, CA
Station 10	Arlington Heights	2590 Jefferson Street, Riverside, CA
Station 11	Orange Crest	19595 Orange Terrace Parkway, Riverside, CA
Station 12	La Sierra South	10692 Indiana Avenue, Riverside, CA
Station 13	Sycamore Canyon	6490 Sycamore Canyon Boulevard, Riverside, CA
Station 14	Canyon Crest	725 Central Avenue, Riverside, CA
Source: City of Riverside Fire Department 2018		

Table 3.8-2: Fire Station Locations Closest to Project Site

Police Station Name	Address	Miles from Project Site
Arlington Heights	2590 Jefferson Street	1.1
Magnolia Center (Midtown)	6395 Riverside Avenue	2.0
Airport	5883 Arlington Avenue	2.7
Mission Grove	6674 Alessandro Boulevard	4.0
Source: Fire Marshal McDowell, Riverside Fire Prevention. Personal communication email September 27, 2018		

Police Protection

To understand the existing law enforcement services setting in the project area and whether implementation of the project could potentially impact existing law enforcement facilities in the area, Riverside Police Department Chief of Police, Sergio Diaz, was contacted via email on September 26, 2018. A response email was received on October 25, 2018, from Sergeant Jayson Wood on behalf of Chief Diaz.

Police protection is provided by the Riverside Police Department (RPD), which provides safety and emergency response services (in addition to others) to the City of Riverside. The mission of the police department is to provide a strong partnership between law enforcement and the community, focused on public safety that provides quality, responsive and effective services through valued employees. Police headquarters are located downtown at 4102 Orange Street. Magnolia Neighborhood Policing Center (NPC) is located at 10540-B Magnolia Avenue and is responsible for central and west NPC operations, community policing, central and special investigations, special operations, training, and records bureau. North and East NPC field operations are based out of the Fairmont Station, located at 3775 Fairmount Boulevard. Several other police facilities are located throughout the City (City of Riverside General Plan 2025). The RPD is currently made up of 368 sworn officers and is scheduled to be at 410 officers by the year 2020. The City of Riverside population was at 303,000 based on the 2010 census. Today, it is believed that the population is approximately 350,000 citizens. With current staffing and population numbers, RPD is has over one officer for every 1,000 citizens (Sergeant Wood, personal communication, 2018).

The police station closest to the project site is Lincoln Station, located at 8181 Lincoln Avenue in Riverside—about 1.1 miles away. According to Sergeant Wood, all police services are provided out of the Lincoln Police Station. School Resource Officers (SROs) are technically stationed at Magnolia Station but generally do not visit the station because they work out of the schools to which they are assigned.

The project site falls into the Central NPC. Generally, 4-6 officers patrol the Central NPC around the clock. These specific officers would not generally respond to a call from the school unless the designated SRO was off duty or if there was an emergency. Routine calls would be serviced by the SRO assigned to the area. RPD currently has eight SROs to serve each high school and alternative

high school located within the City. These SROs are also responsible for the elementary and middle schools that feed into these high schools (Sergeant Wood, personal communication, 2018). The project would feed into Arlington High School and be serviced by the SRO assigned to that campus.

There are five divisions within the RPD: Administrative, Field Operations, Investigations, Special Operations, and Support Services. The RPD also consists of a Records Bureau, Traffic Bureau, and Community Services Bureau. The Field Operations Division is the largest division within the RPD and provides first response to all emergencies, in addition to performing preliminary investigations and basic patrol services to the City.

As described by the City's General Plan EIR, the RPD does not use a formula for calculating the number of officers per capita. Instead, staffing is based on growth and evaluated on a project-by-project basis. Because the project will replace vacant land with a new school building, it may have the potential to incrementally increase RPD response times to the project site or surrounding vicinity However, the project does not anticipate an increase in the number of students served or result in an increase in population in the surrounding vicinity. Instead, the project will serve up to 800 existing students in the neighborhood by reassigning them to a new campus, as such, project implementation will not add new students or contribute to growth.

There are two criteria for patrol response set up by the RPD—priority one and priority two calls. Priority 1 calls are typically life threatening, and officers respond to these within 7 minutes from the time of the call. Priority 2 calls are less urgent and are reached within 12 minutes of the original call.

Development of the project could potentially impair the RPD's ability to maintain response time standards. School related crimes would be handled by the SRO assigned to that area. Average response times would only be affected in the event that the assigned SRO was off duty during an emergency. Impacts to response times would be related specifically to the SRO responsible for supervising this additional proposed elementary school. However, since the students are existing students being reassigned from other area elementary schools to the new campus, the total number of students being serviced will remain relatively stable. In addition, elementary schools generally do not generate a high number of service calls. It is not anticipated that the project would require the construction of new police facilities to accommodate service needs of the school (Sergeant Wood, Personal Communication, 2018).

Within Objective PS-7 of the City of Riverside General Plan 2025, the RPD strives to provide minimum response times of 7 minutes on all Priority 1 calls and 12 minutes on all Priority 2 calls (City of Riverside 2018). However, currently there are no available numbers for response times, because RPD does not have a Computer Aided Dispatch capable of recording accurate response times for the department. Averages have not been compiled and average response times for the City of Riverside are not available (Sergeant Wood, personal communication, 2018).

School Services

Riverside County is made up of two school districts: Alvord Unified School District (AUSD) and Riverside Unified School District (RUSD). AUSD serves west Riverside and a small portion of eastern

Corona. AUSD includes twelve elementary schools, four middle schools, two high schools, and one continuation high school.

RUSD is the 15th largest school district in California, with one special education pre-school, 30 elementary schools, six middle schools (grades 7-8), five high schools (grades 9-12), two continuation high schools, and two adult alternative education schools. RUSD serves a 92 square mile area, including most of Riverside as well as the Woodcrest, Highgrove, and Lake Matthews areas in the County (City of Riverside General Plan 2025). Table 3.8-3 lists all schools located within RUSD.

Approximately 807 students currently reside within the Casa Blanca Neighborhood and attend six different elementary schools (Harrison, Jefferson, Washington, Monroe, Victoria, and Madison). Out of these students, 453 of them are bused to four feeder elementary schools (Harrison, Jefferson, Monroe, and Victoria) (RUSD 2017). The remaining students are responsible for their own transportation to school. The proposed school campus would accommodate these existing students residing in the Casa Blanca neighborhood.

The Riverside Public Works Department created a School Traffic Safety Program to ensure safe routes to school for children. Providing safe routes and encouraging students to walk or cycle to school reduces traffic congestion in the area, provides students with daily exercise, and gives them a sense of self-confidence and independence (City of Riverside General Plan 2025).

Table 3.8-3: Locations of RUSD Schools

School	Grades	Location
Adams Elementary	K–6	8362 Colorado Avenue, Riverside, CA 92504
Alcott Elementary	K–6	2433 Central Avenue, Riverside, CA 92506
Beatty Elementary	K–6	4261 Latham Street, Riverside, CA 92501
Bryant Elementary	K–6	4324 3rd Street, Riverside, CA 92501
Castle View Elementary	K–6	6201 Shaker Drive, Riverside, CA 92506
Emerson Elementary	K–6	4660 Ottawa Avenue, Riverside, CA 92507
Franklin Elementary	K–6	19661 Orange Terrace Parkway, Riverside, CA 92508
Fremont Elementary	K–6	1925 Orange Street, Riverside, CA 92501
Harrison Elementary	K–6	2901 Harrison Street, Riverside, CA 29503
Hawthorne Elementary	K–6	2700 Irving Street, Riverside, CA 92504
Highgrove Elementary	K–6	690 Center Street, Riverside, CA 29507
Highland Elementary	K–6	700 Highlander Drive, Riverside, CA 92507
Jackson Elementary	K–6	4585 Jackson Street, Riverside, CA 92503

Table 3.8-3 (cont.): Locations of RUSD Schools

School	Grades	Location
Jefferson Elementary	K–6	4285 Jefferson Street, Riverside, CA 92504
Kennedy Elementary	K–6	19125 Schoolhouse Lane, Riverside, CA 92508
Lake Matthews Elementary	K–6	12252 Blackburn Road, Riverside, CA 92503
Liberty Elementary	K–6	9631 Hayes Street, Riverside, CA 92503
Longfellow Elementary	K–6	3610 Eucalyptus Avenue, Riverside, CA 92507
Madison Elementary	K–6	3635 Madison Street, Riverside, CA 92504
Magnolia Elementary	K–6	3975 Maplewood Place, Riverside, CA 92506
Mark Twain Elementary	K–6	19411 Krameria Avenue, Riverside, CA 92508
Monroe Elementary	K–6	8535 Garfield Street, Riverside, CA 92504
Mountain View Elementary	K–6	6180 Streeter Avenue, Riverside, CA 92504
Pachappa Elementary	K–6	6200 Riverside Avenue, Riverside, CA 29506
Taft Elementary	K–6	20440 Red Poppy Lane, Riverside, CA 92508
Taft Elementary	K–6	959 Mission Grove Parkway, Riverside, CA 92506
Victoria Elementary	K–6	2910 Arlington Avenue, Riverside, CA 29506 (second closest)
Washington Elementary	K–6	2760 Jane Street, Riverside, CA 92506 (closest)
Woodcrest Elementary	K–6	16940 Krameria Avenue, Riverside, CA 92504
Central Middle School	7–8	4759 Magnolia Avenue, Riverside, CA 92506
Chemawa Middle School	7–8	8830 Magnolia Avenue, Riverside, CA 92503
Earhart Middle School	7–8	20202 Aptos Street, Riverside, CA 29508
Gage Middle School	7–8	6400 Lincoln Avenue, Riverside, CA 92506
Miller Middle School	7–8	17925 Krameria Avenue, Riverside, CA 92504
Sierra Middle School	7–8	4950 Central Avenue, Riverside, CA 92504
University Heights Middle School	7–8	1155 Massachusetts Avenue, Riverside, CA 92507
Arlington High School	9–12	2950 Jackson Street, Riverside, CA 92503
Martin Luther King High School	9–12	9301 Wood Road, Riverside, CA 92508
North High School	9–12	1550 3rd Street, Riverside, CA 92507
Poly High School	9–12	5450 Victoria Avenue, Riverside, CA 92506
Ramona High School	9–12	7675 Magnolia Avenue, Riverside, CA 92504
Notes: Source: Riverside Unified School District Website 2018		

Parks

To understand the existing park and recreational services setting in the project area and whether implementation of the project could potentially impact existing parks or recreational facilities in the area, Adolfo Cruz, Director of Riverside Parks, Recreation, and Community Services Department was contacted via email on September 26, 2018.

The City of Riverside maintains a total of 52 parks and open space areas made up of more than 2,300 acres. The City of Riverside categorizes its parks into four park types: neighborhood parks, pocket parks, community parks, and special use parks. Riverside also has a number of regional/reserve parks, signature parks, and County parks. In addition, the City manages two public golf facilities: Fairmont Golf Course and Riverside Golf Club. The two long established golf courses within the City include Victoria Country Club and Canyon Crest Country Club (City of Riverside General Plan 2025).

Based on the City of Riverside General Plan 2025, Parks and Recreation Element, the City currently has a 1 to 2 ratio in favor of community parks. The Park and Recreation Master Plan and General Plan set a standard of 2 acres of community parkland and 1 acre of neighborhood parkland per one thousand residents. Standards designate that neighborhood parks should be within a 0.5-mile radius of every residence, and community parks within every 2-mile radius (City of Riverside General Plan 2025).

A response email was received from Randy McDaniel, Principal Park Planner, Parks, Recreation, and Community Service Planning and Design Division, on behalf of Director Cruz on October 3, 2018. According to information provided by McDaniel, there are currently 2.26 acres of parks per every 1,000 residents in Riverside. The current target ratio is 3 acres per 1,000 residents.

Villegas Park is the closest park to the project and is located directly behind the project site. Washington Park is the next closest facility, at just 0.8 mile from the site. Villegas Park is in excellent condition, as it was part of a recent $4.5 million renovation and expansion in July 2015. Renovations included a soccer field renovation and other cosmetic upgrades. The City of Riverside Parks, Recreation and Community Department envision the proposed elementary school facilities to work in conjunction with the current park facilities through the implementation of a joint agreement for field use; however, RUSD is not proposing an agreement at this time. McDaniel also noted that the project would formalize safe access to Villegas Park from Lincoln Avenue along existing walkways.

Library Services

To understand the existing library services setting in the project area and whether implementation of the project could potentially impact existing library facilities in the area, Erin Christmas, Riverside Public Library Director, was contacted via email on September 26, 2018. An email was received from Director Christmas on October 2, 2018, in response to the initial email sent to her.

The Riverside Public Library system is committed to promoting lifelong learning with its mission to “spark curiosity and provide tools for discovery” (City of Riverside 2007). The City of Riverside contains a total of eight library facilities throughout the area, with a new Main Library currently

under development. The City has also created several "cybraries" throughout the City, in areas of the community where access to library and internet is limited. (City of Riverside General Plan 2025).

The library located closest to the project site is SSgt. Salvador J. Casa Blanca Library, located at 2985 Madison Street, just 0.81 mile from the site. This location is equipped with 34 public computers and a meeting room with capacity for up to 180 people. As a result of the proposed elementary school project, there would likely be a minimal increase in library usage of 10 to 20 percent including computer use, program attendance, circulation, and attendance. (Director Erin Christmas, personal communication, 2018).

According to Director Christmas, the SSgt. Salvador J. Casa Blanca Library and others in Riverside would be able to accommodate the demand for library services as a result of the proposed school. The current facility should be able to handle any increase in service needs of up to approximately 25 percent with current staffing and facilities. Therefore, no additional facilities would be needed. Below are figures for Riverside Library's 2017/2018 fiscal year usage provided by Director Christmas:

- Gate count: 60,385
- PC use: 12,946 hours
- Circulation: 59,905
- Programs provided 302
- Program attendance: 4,369

Table 3.8-4 below lists the libraries located within the City of Riverside.

Table 3.8-4: Library Locations in Riverside

Library Name	Library Location
Arlington	9556 Magnolia Avenue, Riverside, CA
Arlanza	8267 Philbin Avenue, Riverside, CA
SSgt. Salvador J. Lara Casa Blanca Library	2985 Madison Street, Riverside, CA
SPC. Jesus S. Duran Eastside Library	4033-C Chicago Avenue, Riverside, CA
La Sierra	4600 La Sierra Avenue, Riverside, CA
Main	3581 Mission Inn Avenue, Riverside, CA
Marcy	6927 Magnolia Avenue, Riverside, CA
Orange Terrace	20010-B Orange Terrace Parkway, Riverside, CA
New Main Library (under development)	3911 University Avenue, Riverside, CA
Source: City of Riverside 2018	

Community/Senior Centers

Community centers are the heart of neighborhoods, offering space for workshops, meetings, classes, sports and events. They serve as activity hubs in local neighborhoods and are operated by the Parks, Recreation, and Community Services Department (City of Riverside 2012). According to the City of Riverside General Plan 2025, all community centers in Riverside are located next to parks and are typically operated by the Parks, Recreation and Community Development Department. Recreational programs provided by community centers in Riverside include adult and youth sports leagues, fitness and yoga classes, and aquatic programs. Educational and cultural programs including dance classes, homework assistance, computer assistance, music programs, foreign language, and computer classes.

Ysmael Villegas Community Center is the closest community center to the project location. As previously mentioned in the Parks section, above, Ysmael Villegas Community Center recently underwent a $4.5 million renovation and expansion in July 2015. Renovations included expansion and remodel of the Community Center, Brown room and pool building renovations, 39,000 square feet of landscaping improvements to the south and west of the soccer field, landscaping improvements around the building including an entry courtyard with memorial garden, parking lot, fencing, and lighting improvements.

The community center currently provides an after school program serving Madison Elementary School. McDaniel expects an increase of about 60 students for use of the community center as a result of the new elementary school, which would require additional materials and three extra staff members. He also recommended that Riverside Parks Recreation and Community Services Department work together with the RUSD to find opportunities to partnership and maximize the new public resources resulting from the project (McDaniel, Personal Communication, 2018).

Arlanza Family Resource Center

The Arlanza Family and Neighborhood Resource Center represents a unique multi-disciplinary collaboration of various agencies. These include the Riverside County Department of Mental Health, the Department of Public Social Services, the AUSD and RUSD, and various community-based organizations and neighborhood residents. Centrally located in the Arlanza Neighborhood, the Resource Center provides local residents with a variety of social services, programs, and workshops including education classes, English classes, day-care center, health care, parenting skills workshops, violence prevention workshops, legal aid and many other services as deemed necessary by the local residents. In addition to these core services and programs, the Resource Center provides guidance on how to identify local people who are willing to lend their time and skills to neighborhood projects (City of Riverside General Plan 2025).

Casa Blanca Home of Neighborly Service

This Community Center provides services to residents within the Casa Blanca community. Services offered include an after school program, day classes, children and family literacy, computer classes, parent education, counseling services, homework assistance, and tutoring (City of Riverside General Plan 2025).

Adult and senior centers in Riverside offer a range of classes and activities including karate, kickboxing, yoga, dancing, dog training, resume writing, real estate, and gymnastics. Senior centers offer services including health screenings, seminars, support groups, day trips, and health classes.

Medical Centers

The City of Riverside has a number of long established medical institutions including Riverside Community Hospital, Parkview Community Hospital Medical Center, and Kaiser Permanente Medical Center.

The City of Riverside General Plan 2025 Objective PF-9 aims to make the City of Riverside a central location of diverse, quality, health care services in the Inland Empire.

The City of Riverside's goal is to support expansion of healthcare related business in strategic locations to meet the needs of Riverside residents and persons throughout the Inland Empire, establishing Riverside as a central location for diverse medical and dental businesses and services (City of Riverside General Plan 2025).

Riverside Community Hospital was founded in 1902, and is staffed with over 350 physicians. Licensed for 369 beds, the hospital has a full range of cardiovascular services, ancillary services, a neonatal intensive care unit, and a transitional care unit.

Parkview Community Hospital Medical Center Hospital is the only non-profit hospital in Riverside. Founded in 1958, it contains a staff of over 350 physicians specializing in a range of specialties. Services offered by Parkview Community include neonatal intensive care, diabetes care, maternity care, general surgery, cancer treatment, pediatrics, and physical therapy.

Kaiser Permanente Medical Center is a full service medical facility that serves more than 100,000 members in the Riverside County area. The Kaiser facility encompasses 39 acres with more than 1,600 employees, 130 physicians, and is divided between a hospital and medical office tower. The medical center provides services such as physical therapy, radiology, emergency services, pediatrics, family practice, obstetrics and gynecology, and general surgery, among other specialties (City of Riverside General Plan 2025). In addition, the Kaiser Van Buren offices are located just 4.1 miles from the project site.

3.8.3 - Regulatory Framework

State Regulations

California Building Standards Code

The 2010 California Building Standards Code (CBC), contained in Part 2 of Title 24 of the California Code of Regulations (CCR), identifies building design standards, including those for fire safety. The CBC is based on the 2012 International Building Code but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC. Typical fire safety requirements

of the CBC include the installation of sprinklers in multiple-family buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code, contained in Part 9 of CCR Title 24, incorporates by adoption the International Fire Code of the International Code Council, with California amendments. The California Fire Code regulates building standards set forth in the CBC, fire department access, fire protection systems and devices, fire and explosion hazards safety, hazardous materials storage and use, and standards for building inspection. The California Fire Code is updated and published every 3 years by the California Building Standards Commission.

Quimby Act

The Quimby Act sets a standard park space to population ratio of up to 3 acres of park space per 1,000 persons. Cities with a ratio of higher than 3 acres per 1,000 persons can set a standard of up to 5 acres per 1,000 persons for new development. The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal Census to the amount of city-owned parkland. A 1982 amendment (Assembly Bill 1600 [AB 1600]) requires agencies to clearly show a reasonable relationship between the public need for a recreation facility or parkland and the type of development project on which the fee is imposed.

Mitigation Fee Act

Enacted as AB 1600 on January 1, 1989, the Mitigation Fee Act (California Government Code 66000-66008) requires a local agency that is establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose and proposed use of the fee. The agency also must demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied.

Local Regulations

City of Riverside Municipal Code—Schools (Title 19, Chapter 19.395.030)

- Schools, institutions, or other similar uses and appurtenant off-street parking located in any residential zone, Office (O) or Public Facilities Zone shall be set back at least 20 feet from every property line and shall not be located within any front yard required in such zone; provided, however, that any interior side or rear yard may be used for off-street parking purposes.
- In all other zones, schools and appurtenant off-street parking shall comply with the setback requirements of the underlying zone or any applicable overlay zone or specific plan, whichever is most restrictive.

Park Development Fees

The City of Riverside has four types of park development fees. These include the regional/reserve fee, local fee—including the aquatic facility fee, and the trail fee. All fees are due prior to the

issuance of a building permit for construction or placements, which add a new dwelling unit, a nonresidential unit, or new mobile home to any lot (City of Riverside, Parks, Recreation and Community Development 2015).

Parks

Riverside Municipal Code Chapter 16.44 Regional Parks and Development Fee Section 16.44.040, Payment of Fee: a development fee for regional parks and reserve parks is hereby established for and assessed against all new development and initial mobile home setups in the amount established by the City Council by resolution (Ordinance 5843 § 1, 1990).

Section 16.44.040, Payment of Fee: The required development fee for regional parks and reserve parks shall be paid prior to the issuance of a building permit for new development or an initial mobile home setup permit. No building permit for new development or initial mobile home setup permit shall be issued until such fee has been paid (Ordinance 5843 §1, 1990).

Section 16.60.030, Local Park Development Fee Required: A Local Park Development Fee is hereby imposed on the construction or placement of all nonresidential units, new dwelling units, and new mobile homes in accordance with the schedule of fees that may be established by the City Council by resolution. No fee shall be assessed on any governmental use by the City, county, State, or federal government. (Ordinance 6393 § 41, 1997; Ordinance 6325 § 1, 1996; Ordinance 5111 § 6, 1983; Ordinance 5018 § 6, 1982; Ordinance 4834 § 3, 1980; Ordinance 4531 § 1, 1978; Ordinance 4367 § 1, 1977; Ordinance 4325 § 2 (part), 1976)

Section 16.60.040 Payment of Fees.: Fees required by this chapter shall be paid prior to the issuance of a building permit or a mobile home set up permit for any construction or placements which adds a nonresidential unit, new dwelling unit or new mobile home to any lot or mobile home space. No building permit or mobile home set up permit shall be issued until such fees are paid (Ordinance 6393 § 41, 1997; Ordinance 6325 § 1, 1996; Ordinance 5111 § 7, 1983; Ordinance 5018 § 7, 1982; Ordinance 4325 § 2 (part), 1976).

Park and Recreation Master Plan

The City of Riverside Park and Recreation Master Plan implements the following primary actions to address issues of deferred maintenance, overuse of facilities, negative perceptions from the public, and parkland shortage:

- Revise the City's park standards to reflect the current ratio of 1 to 2 in favor of community parks.
- Establish new park designations and categories to eliminate redundancy and confusion.
- Acquire key remaining open space areas, including La Sierra/Norco Hills, Alessandro and Prenda Arroyos, and wildlife corridors.
- Create seven new park sites in underserved areas of the City.
- Revitalize existing parks, including Fairmount Park.

- Consider Tequesquite Arroyo for a potential neighborhood park site and Arlington Heights for a potential community park site.
- Partner with schools to increase the areas served by recreation programs.
- Improve and create connections between park facilities and increase the safety for bicycle, equestrian, and pedestrian trail systems.

Related City of Riverside General Plan 2025 Policies

The City of Riverside General Plan 2025 sets forth the following goals and policies that are relevant to public services:

Public Facilities Element

- **PF-10.4:** Ensure that youth activities and programs are provided or are accessible by all neighborhoods, either in City facilities or through joint-use or cooperative agreements with other service providers.

Public Safety Element

- **Objective PS-6:** Protect property in urbanized and nonurbanized areas from fire hazards.
- **PS-6.1:** Ensure that sufficient fire stations, personnel, and equipment are provided to meet the needs of the community as it grows in size and population.
- **PS-6.2:** Endeavor to meet/maintain a response time of 5 minutes in Riverside's urbanized areas.
- **PS-6.3:** Integrate fire safety considerations in the planning process.
- **PS-6.5:** Mitigate existing fire hazards related to urban development or patterns of urban development as they are identified and as resources permit.
- **PS-6.7:** Continue to involve the City Fire Department in the development review process.
- Objective PS-7: Provide high-quality police services to all residents and businesses in Riverside.
- **Objective PS-9:** Minimize the effects from natural and urban disasters by providing adequate levels of emergency response services to all residents in Riverside.
- **PS-9.8:** Reduce the risk to the community from hazards related to geologic conditions, seismic activity, flooding and structural and wildland fires by requiring feasible mitigation of such impacts on discretionary development projects.

3.8.4 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, public services and utilities impacts resulting from the implementation of the project would be considered significant if the project would:

> . . . result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order

to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?
b) Police protection?
c) Schools?
d) Parks?
e) Other public facilities?

3.8.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

Fire Protection

Impact PS-1:	**The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.**

Impact Analysis

The project would not require the provision of new or physically altered fire protection facilities. The project would be built in compliance with City of Riverside Building Code Standards. According to a personal comment provided by the Riverside Fire Department, concerns related to response times are nonexistent and no challenges are anticipated at this time. Due to the proximity of several stations surrounding the project site, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Police Protection

Impact PS-2:	**The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.**

Impact Analysis

The RPD provides law enforcement services in the project area. Generally, elementary schools do not generate a large number of service calls to the police department. The construction of Casa Blanca Elementary School would not add an additional burden to the SRO(s) assigned to service the school because the project will serve existing students already attending other RUSD schools. Additionally the project would not require the construction of new RPD facilities or the expansion of existing facilities to accommodate new staff or equipment due to the close proximity of the station located on Lincoln Avenue near the project site. Impact to police services would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Schools

Impact PS-3:	**The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools.**

Impact Analysis

The project would have a significant impact related to schools if it would increase the demand for school services to the degree that new facilities are required. No residences are proposed as part of the project, which could potentially cause an increase in the number of students attending educational facilities in the area. The proposed new elementary school campus would accommodate existing students in the Casa Blanca Neighborhood. As students are reassigned to the new Casa Blanca campus, there will be a reduction in impacts to existing schools they currently attend. As a proposed new elementary school designed to serve existing students, there would not be an increase in the student population and therefore no impacts would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Parks

Impact PS-4:	**The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks.**

Impact Analysis

The construction of the project is not expected to substantially increase demands on existing parks in the area. The project itself would provide recreational facilities on campus for students, including sports fields (baseball, basketball, and soccer) and hard courts. In addition, Villegas Park is located directly behind the proposed elementary school project site. It is assumed that although the project would provide employment opportunities for residents already in the City of Riverside, these individuals may already be utilizing local recreational facilities and parks within the area. The project is being developed to serve students now attending existing elementary schools at in RUSD. The proposed school would serve communities around the project site with a new elementary school. It would neither promote the movement of new students to RUSD, nor increase the population of the City. Thus it would not increase strain on existing park facilities. Therefore, the project would have a less than significant impact on parks and recreational facilities. Based on personal comments from Randy McDaniel, impacts would not be associated with the implementation of the school and new facilities would not be required.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Other Public Facilities

Impact PS-5: **The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities.**

Impact Analysis

Library Services

The project will provide a new campus to serve existing elementary age students already in the project area. The project will not introduce additional or new populations to the project area. It is expected that the majority of new positions will be filled from existing residents in the area. Thus, a substantial quantity of people will not relocate within the County Library system's service area because of the project, as a majority of future employees will already reside within the area and will not have to relocate. The project includes an on campus library for those attending and working at the elementary school. Current facilities would not be affected due to construction of the project and additional library staff would not be needed as a result of the project.

Community Centers

Based on personal comments from Principal Park Planner, Randy McDaniel, impacts would not be associated with the implementation of the school and new facilities would not be required. While additional staffing and materials would be needed, the newly renovated Ysmael Villegas Community Center would provide adequate service to the project area and support any additional student uses because of its close proximity to the site.

Medical Services

There are three main healthcare facilities in the City of Riverside. As previously mentioned, it is anticipated that the vast majority of the new positions will be filled from existing residents in the area. Thus, it is not expected that a substantial quantity of people will move to these hospital service areas because of the project, as a majority of future employees will already reside within Riverside. Therefore, the project is anticipated to have a less than significant impact with regard to health services.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

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3.9 - Transportation and Traffic

3.9.1 - Introduction

This section describes the existing transportation and traffic conditions and potential effects from project implementation on surrounding roads and intersections. Descriptions and analysis in this section are based on information contained in the Traffic Impact Analysis (TIA) dated November 2, 2018, prepared by Linscott, Law & Greenspan, Engineers (LLG), and included in this Draft Focused EIR as Appendix H. To analyze potential environmental impacts to transportation and traffic, Riverside Unified School District (RUSD) will utilize City of Riverside standards in this section.

3.9.2 - Existing Conditions

Project Study Area

The project is located at 7351 Lincoln Avenue in the Casa Blanca Neighborhood on the northern side of Lincoln Avenue and Sonora Place in the City of Riverside. The site has regional access via State Route 91 (SR-91) through the Madison Street exit. The project site is vacant, and surrounding land uses consist of residential uses, with the Church of Christ to the east, residential uses to the west and south, and a baseball field and community center to the north of the project site.

Intersection Analyzed

The traffic analysis evaluates the existing operating conditions at 11 key study intersections in the project vicinity, estimates the trip generation potential of the project, superimposes the project-related traffic volumes on the circulation system, as it currently exists, and forecasts future operating conditions without and with the project. Where necessary, intersection improvements/mitigation measures are identified. This traffic report satisfies the traffic impact requirements of the City of Riverside.[1] It should be noted that the project will serve existing elementary school students and will not be growth inducing, as detailed in Section 6, Other CEQA, of this Draft Focused EIR. Based on information provided by RUSD staff, 836 elementary school students located within the project's academic service boundary currently attend other RUSD elementary schools. The project will provide a closer campus in their respective neighborhoods that will require less travel. In reality, the project will represent a shift in traffic that is already on the existing street system, resulting in no new actual project traffic, but is difficult to quantify at each key study intersection given that it would require identifying the path of travel of each existing student. Therefore, in order to provide a conservative traffic analysis, the potential impacts associated with the project (i.e. 800 students) have been evaluated based on the presumption that all project traffic is new to the study area.

The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak-hour traffic information has been collected at 11 key study intersections on a "typical" weekday for use in the preparation of intersection Level of Service (LOS) calculations. Information concerning cumulative projects (planned and/or approved) in the project vicinity has been researched at the City of Riverside. Based on our research, there are 20 cumulative projects in

[1] Source: City of Riverside Public Works Department *Traffic Impact Analysis Preparation Guide*, dated December 2017.

the City of Riverside. These 20 planned and/or approved cumulative projects were considered in the cumulative traffic analysis for this project.

This traffic report analyzes existing and future weekday AM peak-hour and PM peak-hour traffic conditions for a near-term (Year 2022) and long-term (Year 2040) traffic setting upon completion of the project. Peak-hour traffic forecasts for the Year 2022 horizon year have been projected by increasing existing traffic volumes by an annual growth rate of two percent per year and adding traffic volumes generated by 20 cumulative projects. Long-term (Year 2040) peak-hour traffic forecasts were projected based on modeled traffic projections prepared by LSA utilizing the Southern California Association of Governments (SCAG) Year 2040 Model.

Eleven key study intersections have been selected for evaluation based on discussions with City of Riverside Public Works Department staff, and based on review of the existing transportation system surrounding the project site. The 11 key study intersections listed below provide local access to the project site and define the extent of the boundaries for this traffic impact investigation.

Key Study Intersections

1. Madison Street at Indiana Avenue
2. Madison Street at Emerald Avenue
3. Madison Street at Lincoln Avenue

4A. Madison Street at Victoria Avenue (West)
4B. Madison Street at Victoria Avenue (East)

5. Sonora Place at Lincoln Avenue
6. Collingwood Street at Lincoln Avenue
7. Dorlen Street at Lincoln Avenue
8. Washington Street at Indiana Avenue
9. Washington Street at Marguerita Avenue
10. Washington Street at Lincoln Avenue

11A. Washington Street at Victoria Avenue (West)
11B. Washington Street at Victoria Avenue (East)

The LOS investigations at the 11 key study intersections were used to evaluate the potential traffic-related impacts associate with area growth, cumulative projects, and the project. When necessary, this report details intersection improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable LOS and/or mitigate the impact of the project.

Included in this analysis are:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- AM and PM peak-hour capacity analyses for Existing Conditions,
- AM and PM peak-hour capacity analyses for Existing Plus Project conditions,

- AM and PM peak-hour capacity analyses for Existing Plus Ambient Growth to the Year 2022 without and with project traffic conditions,
- AM and PM peak capacity analyses for Existing Plus Ambient Growth to the Year 2022 Plus Project plus Cumulative Projects traffic conditions (i.e., cumulative traffic conditions),
- AM and PM peak-hour capacity analyses for long-term (Year 2040) without and with project traffic conditions,
- Site Access Evaluation, and
- Recommended Improvements (if any).

The project site is generally located north of Lincoln Avenue between Bunker Street and Dorlen Street in City of Riverside. The project proposes to construct a new elementary school with a maximum student enrollment of 800 students. The academic service boundary as provided by RUSD staff is Indiana Avenue to the north, Victoria Avenue to the south, Jefferson Street to the west, and Mary Street to the east. Based on information provided by RUSD staff, 309 students within the academic service boundary will be eligible to be bused to/from the site based on their distance of 1.25 or more miles. The project is expected to be constructed and fully operational by the Year 2022.

Site Access

Access to the project site will be provided via four full access, unsignalized driveways located along Lincoln Avenue. The westerly project driveway is referred to as Project Driveway No. 1. The project driveway located between Sonora Place and Collingwood Street is referred to as Project Driveway No. 2. Project Driveway No. 3 is located opposite of Collingwood Street (slightly offset to the east). The easterly project driveway is referred to as Project Driveway No. 4.

Project Driveway No. 3 shall be directly aligned (i.e., centerline to centerline) with Collingwood Street to minimize conflicting vehicular movements

Existing Street Network

Regional access to the project site is provided via SR-91. Direct access to the project site from SR-91 is provided via the interchange at Madison Street. The principal local network of streets serving the project site are both Madison Street, Lincoln Avenue, and Washington Street. The following discussion provides a brief synopsis of these key streets. The descriptions are based on an inventory of existing roadway conditions.

Madison Street is generally a two-lane, divided roadway in the project vicinity, oriented in the north-south direction. On-street parking is generally permitted along this roadway in the general project vicinity. The posted speed limit along Madison Street is 35 miles per hour (mph). Traffic signals control the key study intersections of Madison Street and Indiana Avenue and Lincoln Avenue.

Lincoln Avenue is generally a three-lane (i.e., two westbound lanes and one eastbound lane), undivided roadway west of Sonora Place, a two-lane undivided roadway between Sonora Place and Washington Street and a three-lane (i.e., two westbound lanes and one eastbound lane), undivided

roadway east of Washington Street, oriented in the east-west direction. Lincoln Avenue borders the project site to the south and will provide access to the project site via four full access driveways. The posted speed limit along Lincoln Avenue is 40 mph. A traffic signal controls the key study intersection of Lincoln Avenue at Madison Street.

Washington Street is generally a two-lane, divided roadway in the project vicinity, oriented in the north-south direction. On-street parking is generally permitted along this roadway in the general project vicinity. The posted speed limit along Washington Street is 35 mph. A traffic signal controls the key study intersection of Washington Street and Indiana Avenue.

Exhibit 3.9-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This exhibit identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area study intersections.

Existing Traffic Volumes

Eleven key study intersections have been identified as locations at which to evaluate existing and future traffic operation conditions. Some portion of potential project-related traffic will pass through each of these intersections and their analysis will reveal the expected relative impacts of the project. These key study intersections were selected for evaluation based on discussions with City of Riverside Public Works Department staff.

Existing AM and PM peak-hour traffic volumes for the 11 key study intersections were obtained from manual peak-hour turning movement counts conducted by Transportation Studies, Inc. (TSI) in August 2018. Exhibit 3.9-2 and Exhibit 3.9-3 illustrate the existing AM and PM peak-hour traffic volumes at the 11 key study intersections evaluated by this report, respectively.

Level of Service Analysis Methodologies

AM and PM peak-hour operating conditions for the 11 key study intersections were evaluated using the methodology outlined in Chapter 19 of the Highway Capacity Manual 6 (HCM 6) for signalized intersections, the methodology outlined in Chapter 20 of the HCM 6 for two-way stop-controlled intersections, and the methodology outlined in Chapter 21 of the HCM 6 for all-way stop-controlled intersections.

Highway Capacity Manual) Method of Analysis (Signalized Intersections)

Based on the HCM operations method of analysis, LOS for signalized intersections and approaches is defined in terms of control delay, which is a measure of the increase in travel time due to traffic signal control, driver discomfort, and fuel consumption. Control delay includes the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed. LOS criteria for traffic signals are stated in terms of the control delay in sections per vehicle. The LOS thresholds established for the automobile mode at a signalized intersection are shown in Table 3.9-1.

Table 3.9-1: Level of Service Criteria for Signalized Intersections (HCM 6 Methodology)

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high *v/c* ratios. Individual cycle failures are frequent occurrences.
F	≥80.0	Severe congestion. LOS F, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.
Notes: Source: Highway Capacity Manual 6, Chapter 19: Signalized Intersections.		

Highway Capacity Manual Method of Analysis (Unsignalized Intersections)

The HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of unsignalized intersections. LOS criteria for unsignalized intersections differ from LOS criteria for signalized intersections as signalized intersections are designed for heavier traffic and therefore a greater delay. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable, which can reduce users' delay tolerance.

Two-Way Stop-Controlled Intersections

Two-way stop-controlled intersections are comprised of a major street, which is uncontrolled, and a minor street, which is controlled by stop signs. LOS for a two-way stop-controlled intersection is determined by the computed or measure control delay. The control delay by movement, by

approach, and for the intersection as a whole is estimated by the computed capacity for each movement. LOS is determined for each minor-street movement (or shred movement) as well as major-street left turns. The worst side street approach delay is reported. LOS is not defined for the intersection as a whole or for major-street approaches, as it is assumed that major-street through vehicles experience zero delay. The HCM control delay value ranges for two-way stop-controlled intersections are shown in Table 3.9-2.

Table 3.9-2: Level of Service Criteria for Unsignalized Intersections (HCM 6 Methodology)

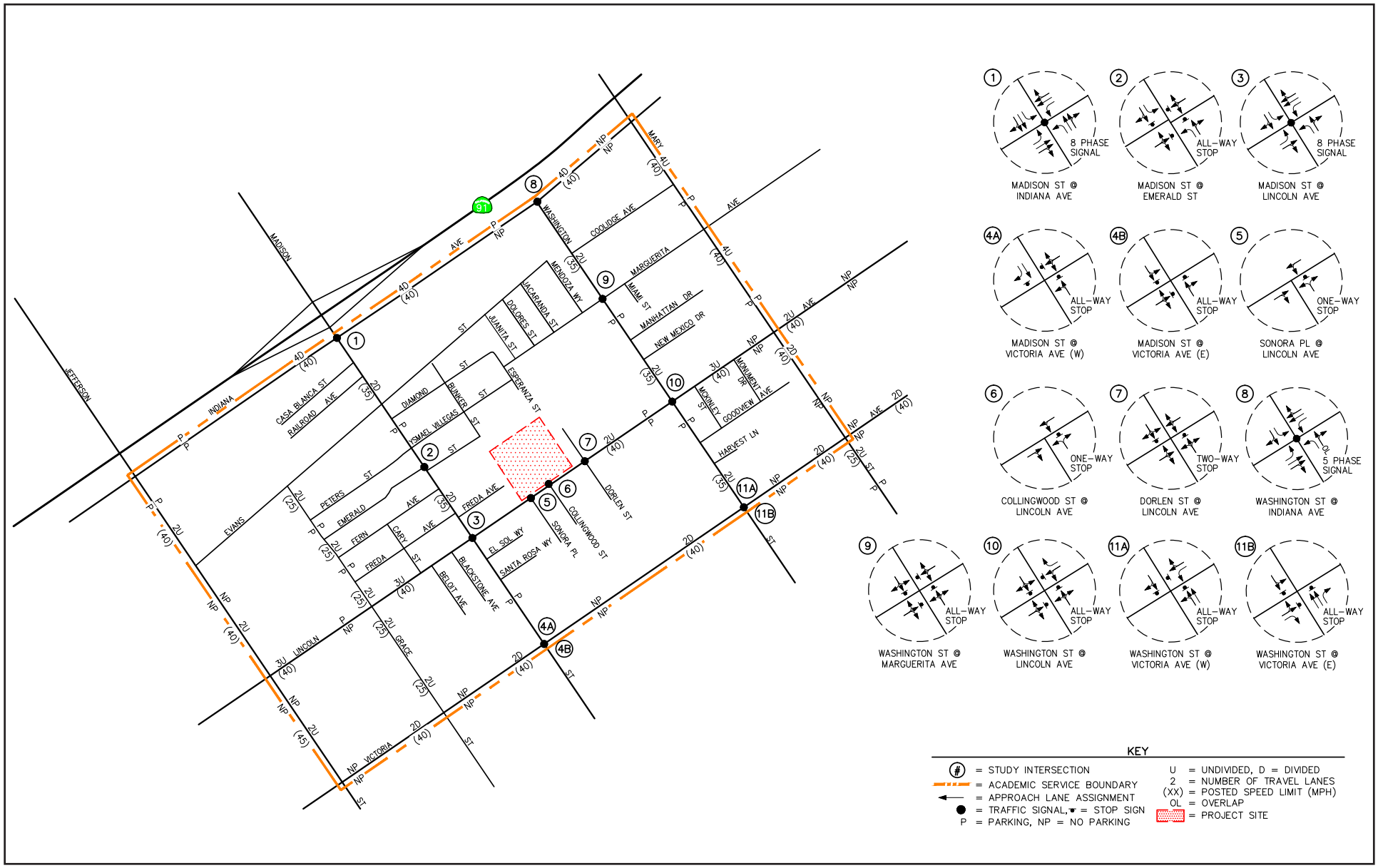
Level of Service (LOS)	Highway Capacity Manual (HCM) Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤10.0	Little or no delay
B	> 10.0 and ≤15.0	Short traffic delays
C	> 15.0 and ≤25.0	Average traffic delays
D	> 25.0 and ≤35.0	Long traffic delays
E	> 35.0 and ≤50.0	Very long traffic delays
F	> 50.0	Severe congestion

Source:
HCM 6, Chapter 20: Two-Way Stop-Controlled Intersections. The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

HCM 6, Chapter 21: All-Way Stop-Controlled Intersections. For approaches and intersection-wide assessment, LOS is defined solely by control delay.

All-Way Stop-Controlled Intersections

All-way stop-controlled intersections require every vehicle to stop at the intersection before proceeding. Because each driver must stop, the decision to process into the intersection is a function of traffic conditions on the other approaches. The time between subsequent vehicle departures of traffic conditions on the other approaches. The time between subsequent vehicle departures depends on the degree of conflict that results between the vehicles and vehicles on the other approaches. This methodology determines the control delay for each lane on the approach, computes a weighted average for the whole approach, and computes a weighted average for the intersection as a whole. LOS at the approach and intersection levels is based solely on control delay. The HCM control delay value ranges for all-way stop-controlled intersections are shown in Table 3.9-2.



Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-1
Existing Roadway Conditions and Intersection Controls

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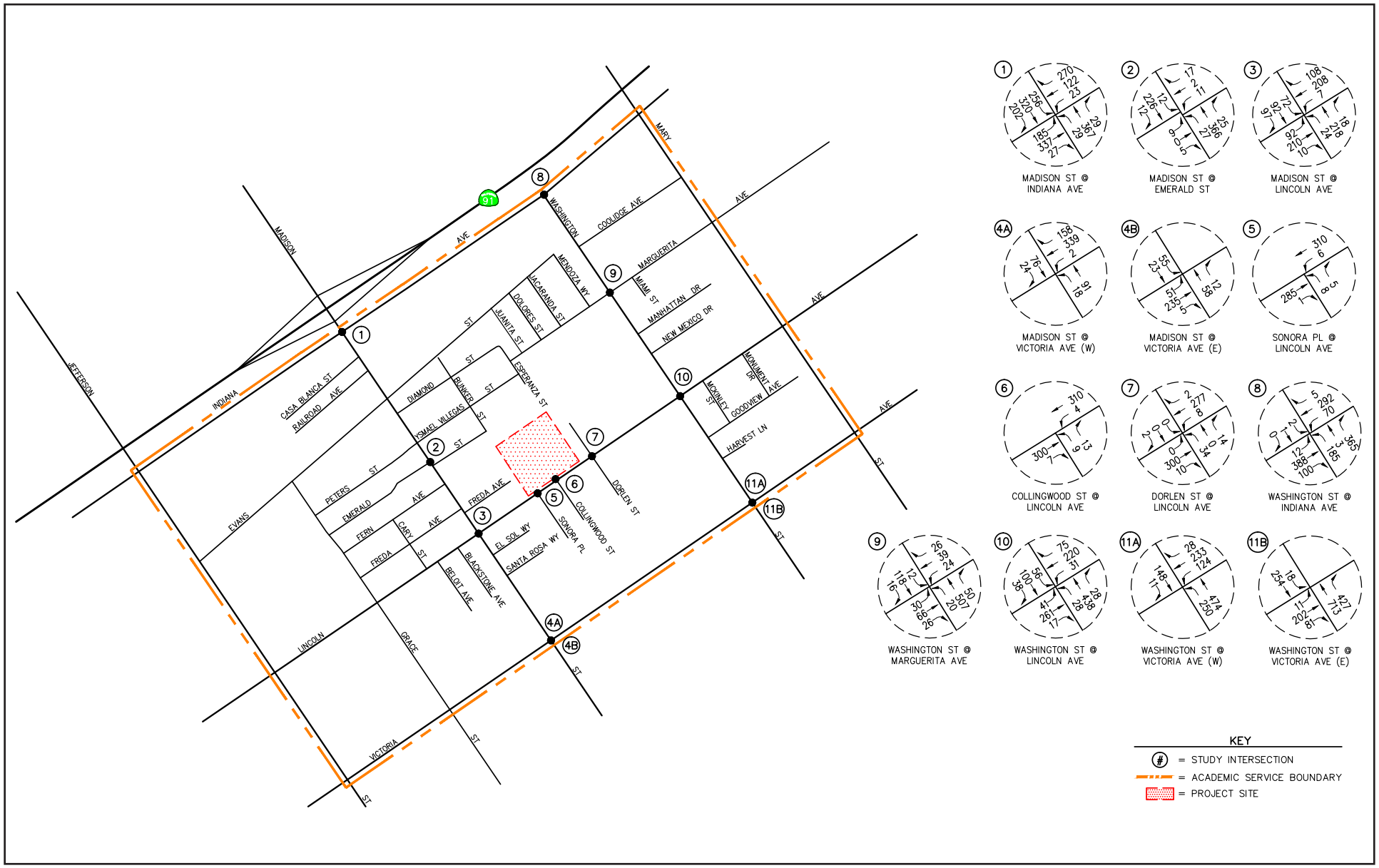

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-2
Existing AM Peak Hour Traffic Volumes

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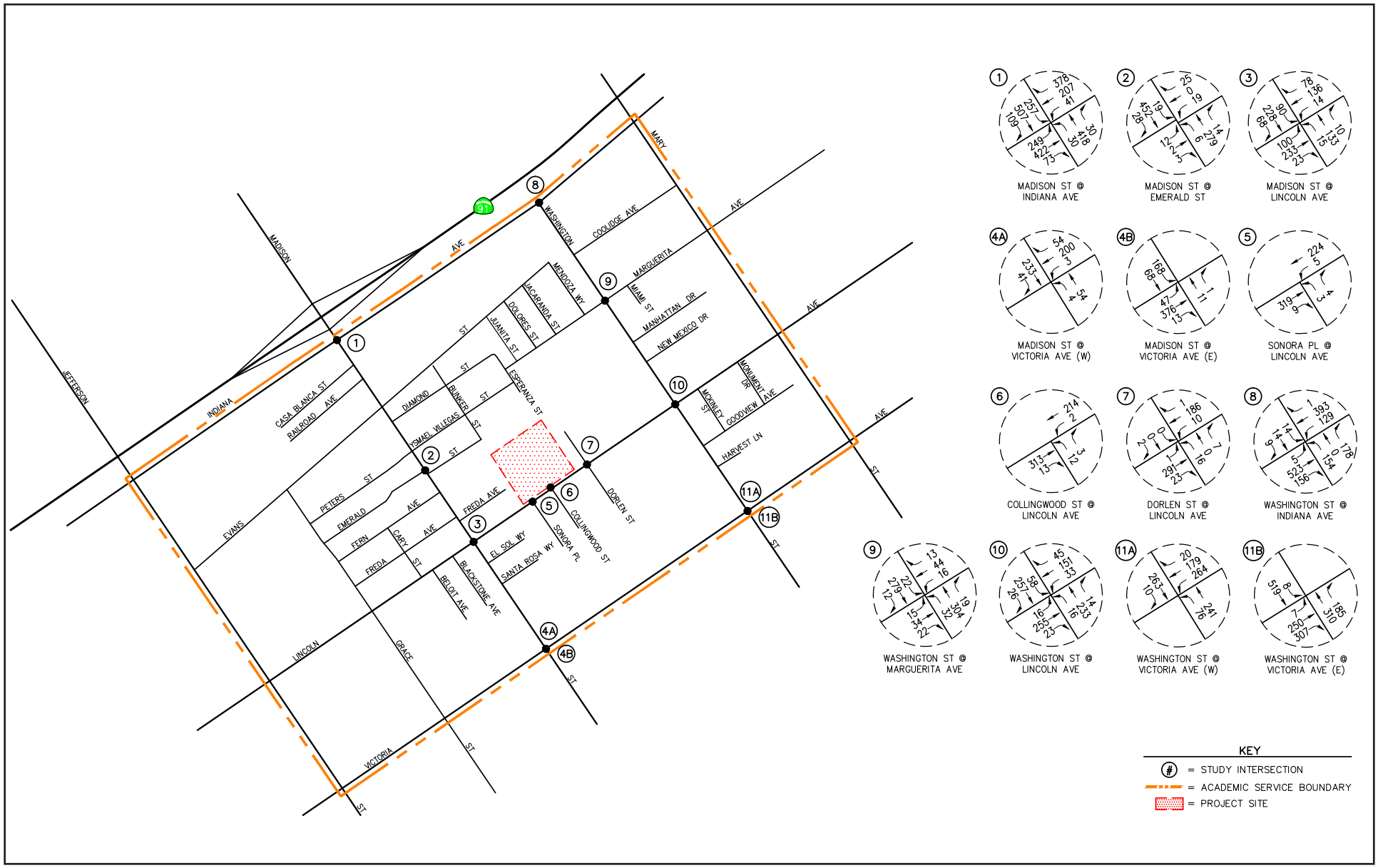

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-3
Existing PM Peak Hour Traffic Volumes

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Level of Service Standards

The City of Riverside allows LOS D to be used as the maximum acceptable threshold for the study intersections and roadways of Collector or higher classification. However, at some key locations, such as City arterial roadways, which are used as a freeway bypass by regional through traffic and at heavily traveled freeway interchanges, LOS E may be acceptable as determined on a case-by-case basis. Locations that may warrant the LOS E standard include portions of Arlington Avenue/Alessandro Boulevard, Van Buren Boulevard throughout the City, portions of La Sierra Avenue and selected freeway interchanges. The City also recognizes that along key freeway-feeder segments during peak commute hours, LOS F may be expected due to regional travel patterns. A higher standard, such as LOS C or better, may be adopted for local streets in residential areas. Based on the above, LOS D is required for the 11 key study intersections.

Existing Level of Service Results

Table 3.9-3 summarizes the existing peak-hour service level calculations for the 11 key study intersections based on existing traffic volumes and current street geometry. Review of Table 3.9-3 indicates that one of the 11 key study intersections currently operates at an unacceptable level of service during the AM peak-hour. The intersection of Washington Street at Lincoln Avenue currently operates at unacceptable LOS E during the AM peak-hour. The remaining 10 key study intersections currently operate at acceptable LOS D or better during the AM and PM peak-hours.

Appendix B of the TIA presents the Existing peak-hour HCM/LOS calculation worksheets for the 11 key study intersections.

Table 3.9-3: Existing Peak-hour Levels of Service

Key Intersection		Time Period	Minimum Acceptable LOS	Control Type	HCM	LOS
1.	Madison Street at Indiana Avenue	AM PM	D	8Ø Traffic Signal	34.9 s/v 33.7 s/v	C C
2.	Madison Street at Emerald Street	AM PM	D	All-Way Stop	15.2 s/v 15.3 s/v	C C
3.	Madison Street at Lincoln Avenue	AM PM	D	8Ø Traffic Signal	22.9 s/v 23.8 s/v	C C
4A.	Madison Street at Victoria Avenue (West)	AM PM	D	All-Way Stop	13.0 s/v 9.4 s/v	B A
4B.	Madison Street at Victoria Avenue (East)	AM PM	D	All-Way Stop	9.2 s/v 12.1 s/v	A B
5.	Sonora Place at Lincoln Avenue	AM PM	D	One-Way Stop	12.4 s/v 11.9 s/v	B B
6.	Collingwood Street at Lincoln Avenue	AM PM	D	One-Way Stop	12.4 s/v 12.7 s/v	B B
7.	Dorlen Street at Lincoln Avenue	AM PM	D	Two-Way Stop	15.5 s/v 12.5 s/v	C B

Table 3.9-3 (cont.): Existing Peak-hour Levels of Service

Key Intersection		Time Period	Minimum Acceptable LOS	Control Type	HCM	LOS
8.	Washington Street at Indiana Avenue	AM PM	D	5Ø Traffic Signal	18.1 s/v 15.8 s/v	B B
9.	Washington Street at Marguerita Avenue	AM PM	D	All-Way Stop	33.0 s/v 11.8 s/v	D B
10.	Washington Street at Lincoln Avenue	AM PM	D	All-Way Stop	**46.7 s/v** 18.1 s/v	E C
11A.	Washington Street at Victoria Avenue (West)	AM PM	D	All-Way Stop	13.1 s/v 11.0 s/v	B B
11B.	Washington Street at Victoria Avenue (East)	AM PM	D	All-Way Stop	13.0 s/v 15.7 s/v	B C

Notes:
LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
Bold Delay/LOS values indicate adverse service levels based on City of Riverside LOS standards
s/v = seconds per vehicle

Traffic Forecasting Methodology

In order to estimate the traffic impact characteristics of the project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak-hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations and/or rates to the project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway segments and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the project is isolated by comparing operational (LOS) conditions at the selected key intersection using expected future traffic volumes with and without forecast project traffic. If necessary, the need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

Project Traffic Characteristics

Traffic generation is expressed in vehicle trip ends, deigned as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the 10th Edition of Trip Generation, published by the Institute of Transportation Engineers (ITE) (ITE 2017).

It should be noted that the project will serve existing elementary school students and will not be growth inducing. Based on information provided by RUSD staff, 836 elementary school students located within the project's academic service boundary currently attend other RUSD elementary schools and the project will provide a closer campus in their respective neighborhoods that will require less travel. In reality, the project will represent a shift in traffic that is already on the existing street system, resulting in no new actual project traffic, but is difficult to quantify at each key study intersection given that it would require identifying the path of travel of each existing student. Therefore, in order to provide a conservative traffic analysis, the potential impacts associated with the project (i.e. 800 students) have been evaluated based on the highly unlikely worst-case scenario that all project traffic is new to the study area.

Table 3.9-4 summarizes the trip generation rates used in forecasting the vehicular trips generated by the project and presents the project's forecast peak-hour and daily traffic volumes. As shown, the trip generation potential of the project was estimated using the ITE Land Use 520: Elementary School trip rates. Review of Table 3.9-4 indicates that the project is forecast to generate 1,512 daily trips, with 536 trips (289 inbound, 247 outbound) produced in the AM peak-hour, and 136 trips (65 inbound, 71 outbound) produced in the PM peak-hour on a "typical" weekday. It should be noted that this trip generation potential does not likely account for the amount of students that will utilize the school bus and/or walk to school and therefore provides for a very conservative analysis.

Table 3.9-4: Project Traffic Generation Forecast

ITE Land Use Code/Project Description	Daily 2-Way	AM Peak-hour			PM Peak-hour		
		Enter	Exit	Total	Enter	Exit	Total
Generation Factors							
520: Elementary School (TE/Student)	1.89	54%	46%	0.67	48%	52%	0.17
Generation Forecast							
Casa Blanca Elementary School (800 Students)	1,512	289	247	536	65	71	136

Note:
TE/Student = trip end per student
Source: Trip Generation, 10th Edition, ITE, Washington, D.C. 2017.

Project Traffic Distribution and Assignment

Exhibit 3.9-4 illustrates the general, directional traffic distribution pattern for the project. Project traffic volumes both entering and exiting the project site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic carriers (i.e., Madison Street, Washington Street, etc.),
- The school attendance zone (academic service boundary),
- Expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals,
- Existing intersection traffic volumes, and
- Ingress/egress availability at the project site.

The anticipated AM and PM peak-hour traffic volumes associated with the project are presented in Exhibit 3.9-5 and Exhibit 3.9-6. The traffic volume assignments presented in Exhibit 3.9-6 and Exhibit 3.9-7 reflect the traffic distribution characteristics and traffic generation forecast presented in Exhibit 3.9-4.

Existing Plus Project Traffic Conditions

The Existing Plus Project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared pursuant to the California Environmental Quality Act (CEQA) Guidelines, which require that the potential impacts of a project be evaluated upon the circulation system, as it currently exists. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to mitigate the direct traffic impacts of the project, if any.

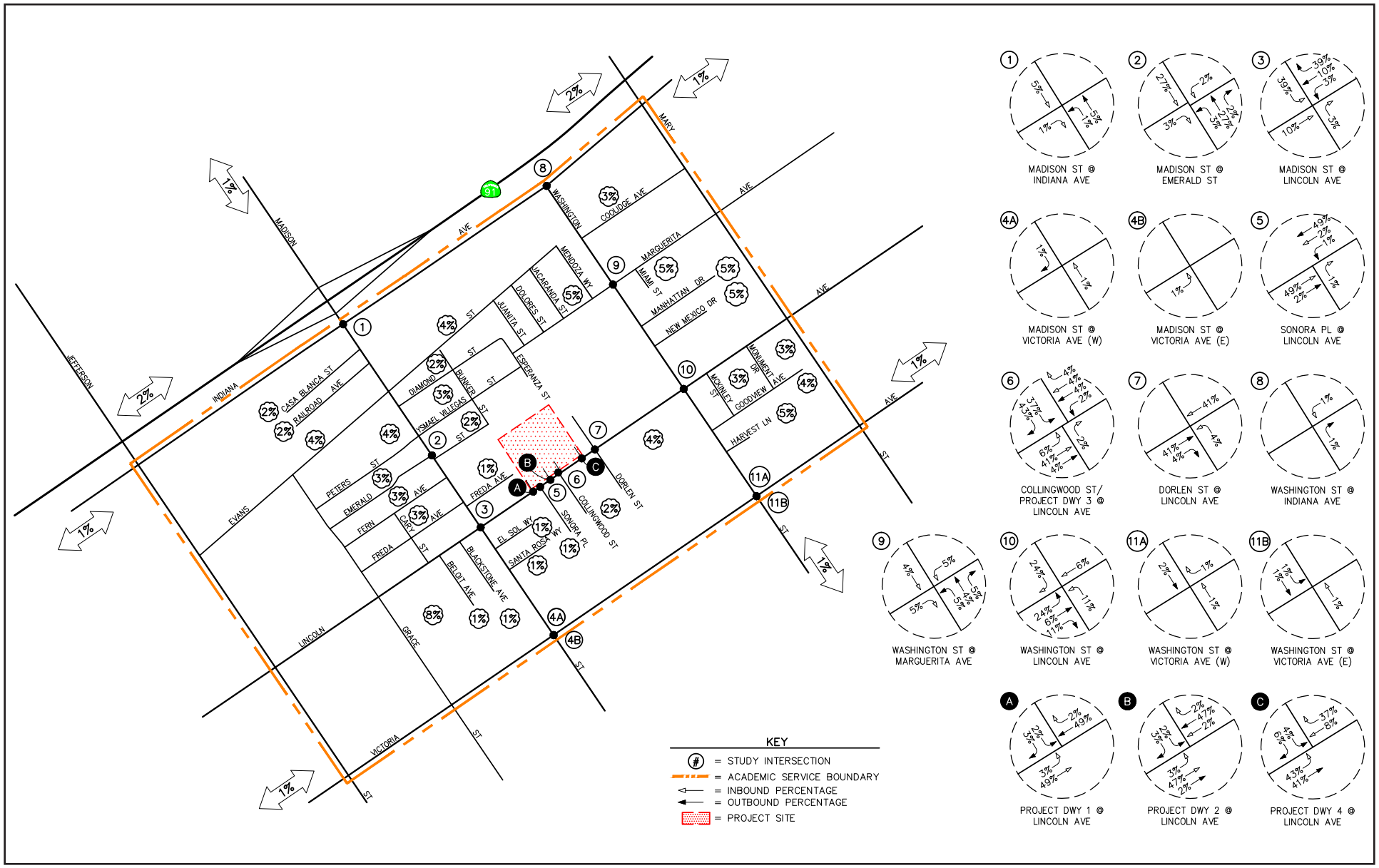
Exhibit 3.9-7 and Exhibit 3.9-8 present projected AM and PM peak-hour traffic volumes at the 11 key study intersections with the addition of the trips generated by the project to existing traffic volumes.

Future Traffic Conditions

Year 2022 Traffic Conditions

Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated using an ambient growth factor. The ambient traffic growth factor is intended to include unknown and future cumulative projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. Consistent with prior traffic studies conducted in the City of Riverside, the future growth in traffic volumes has been calculated at 2 percent per year. Applied to existing Year 2018 traffic volumes results in an 8 percent increase growth in existing volumes to horizon year 2022.



Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-4
Project Traffic Distribution Pattern

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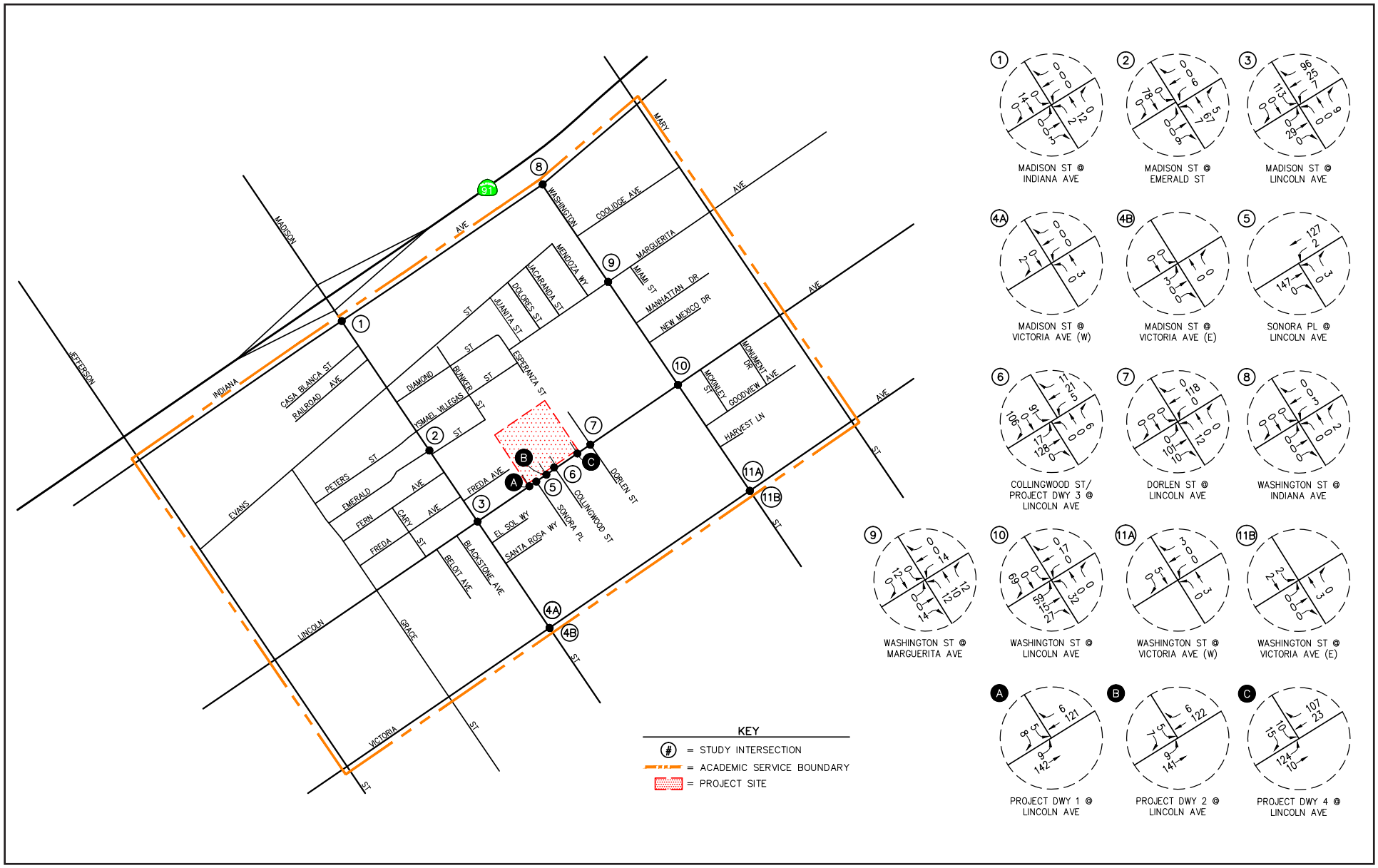

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-5
AM Peak Hour Project Traffic Volumes

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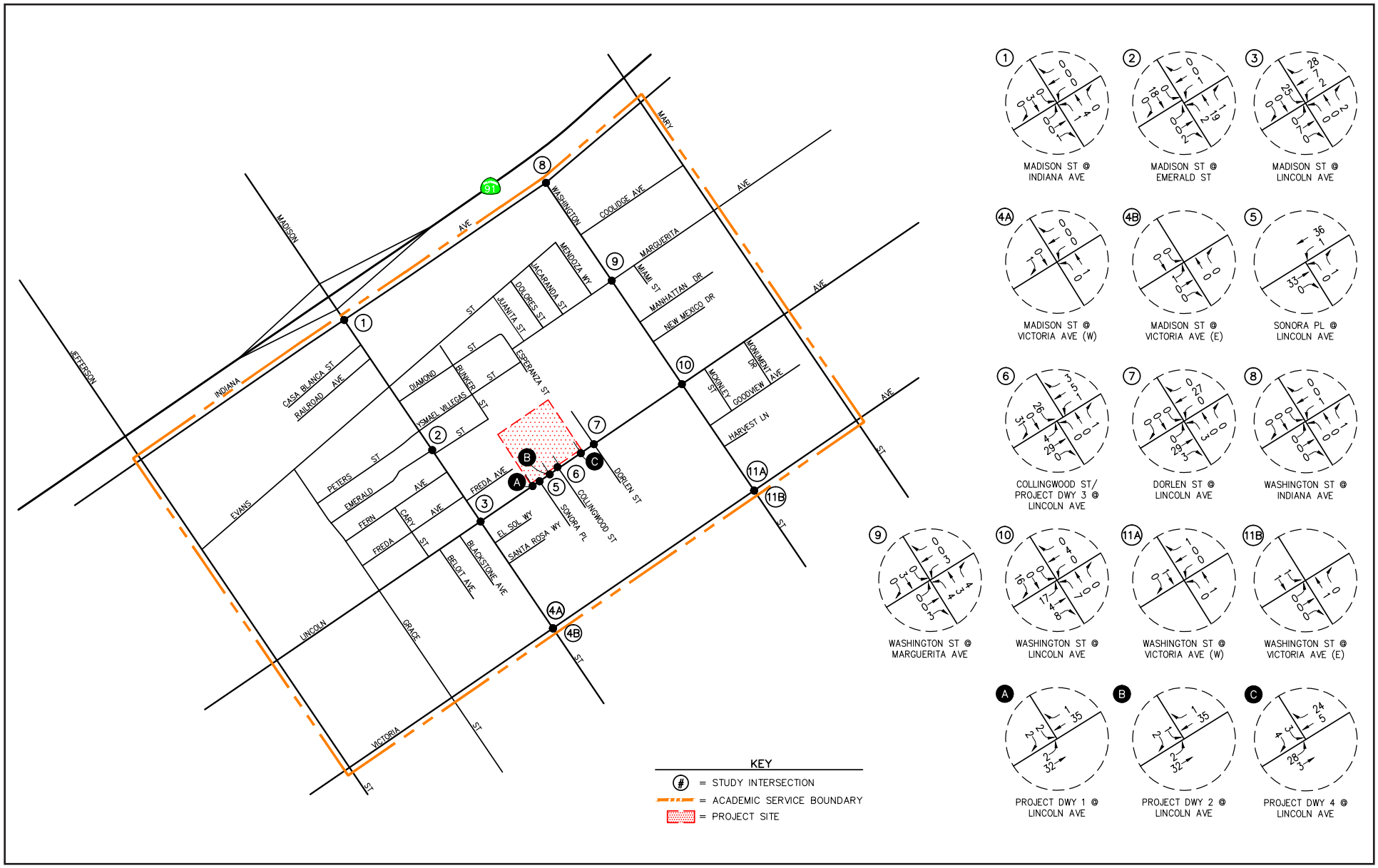

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-6
PM Peak Hour Project Traffic Volumes

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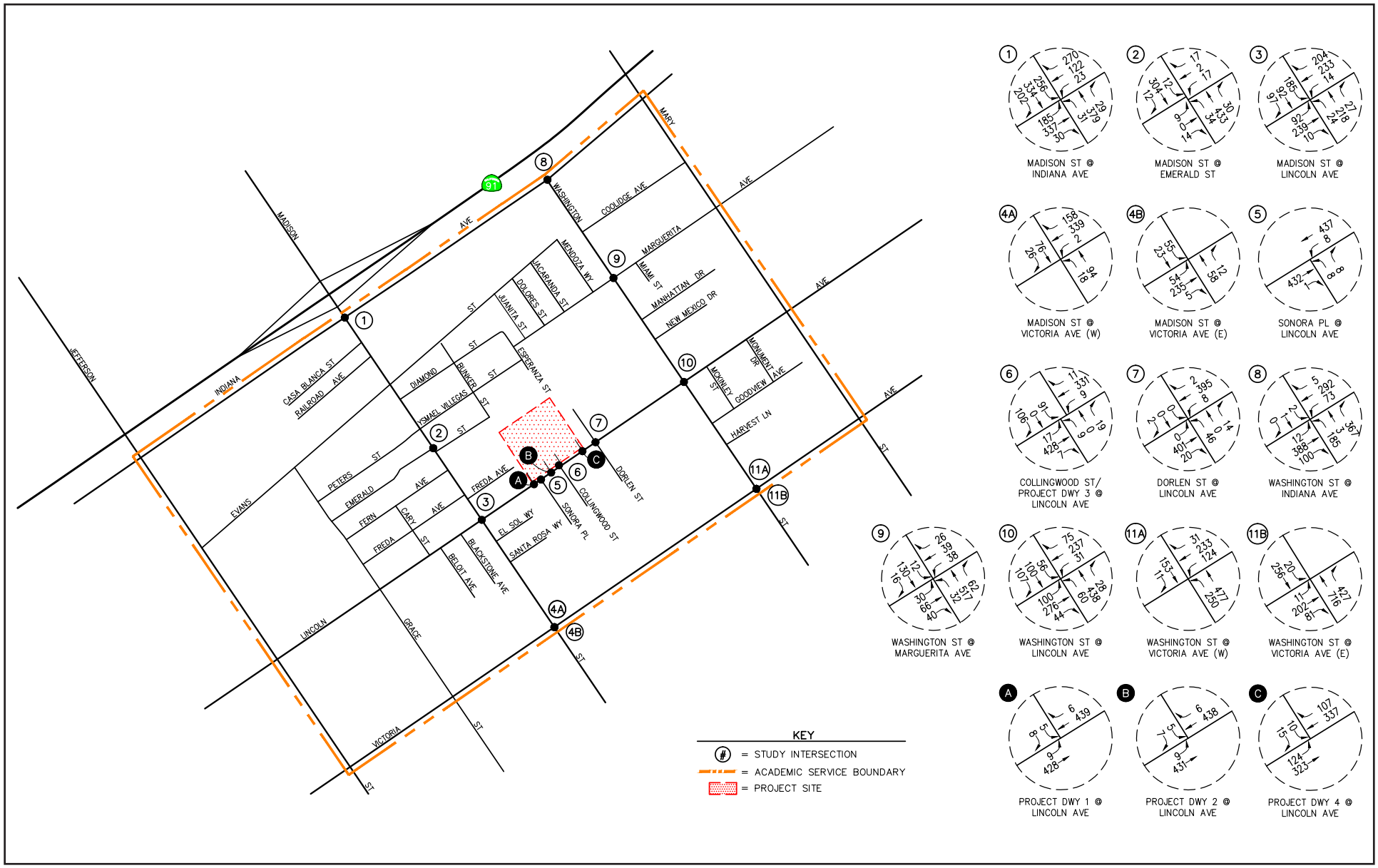

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-7
Existing Plus Project AM Peak Hour Traffic Volumes

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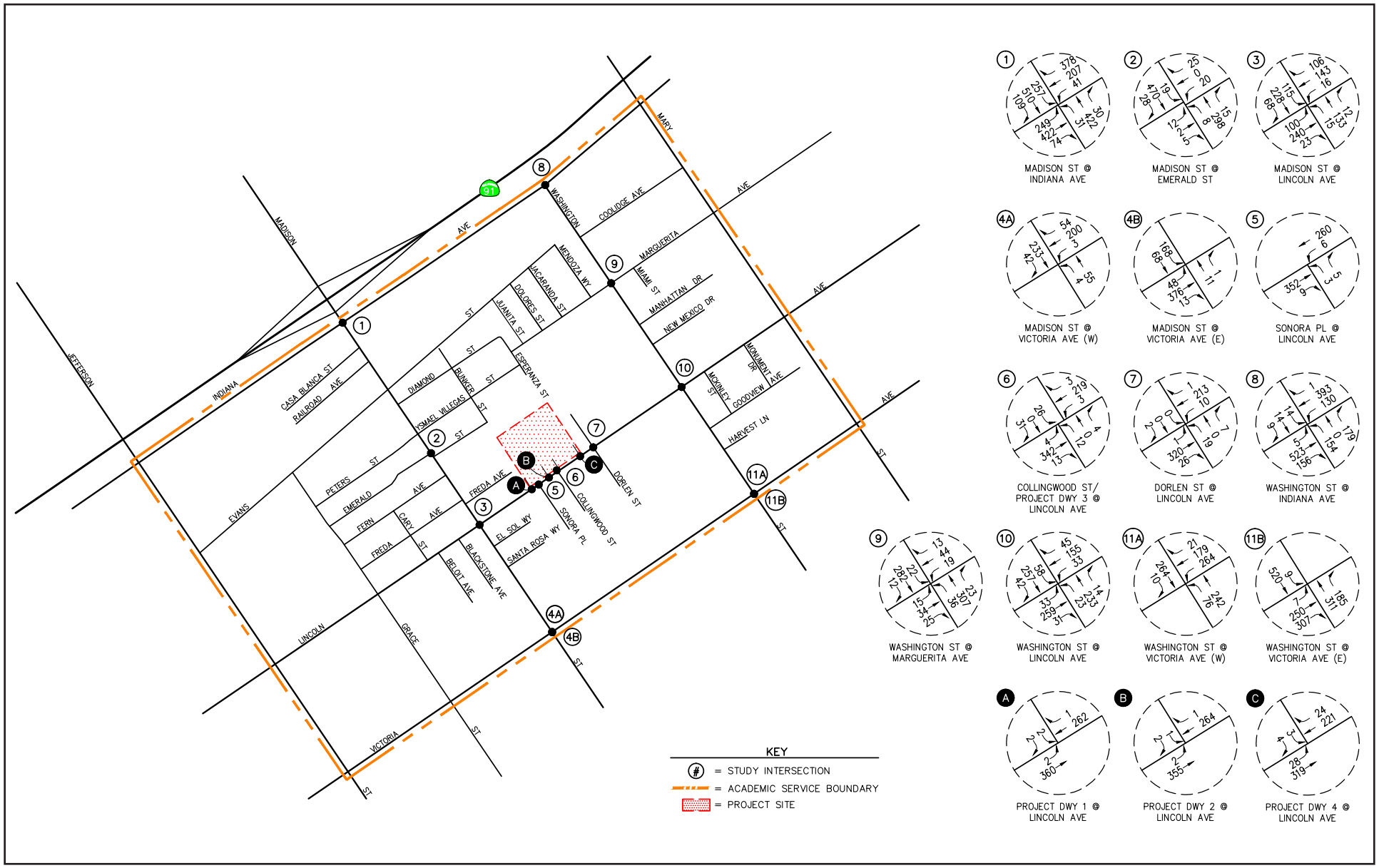

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-8
Existing Plus Project PM Peak Hour Traffic Volumes

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Cumulative Projects Traffic Characteristics

In order to make a realistic estimate of future on-street conditions prior to implementation of the project, the status of other known development projects (cumulative projects) has been researched by the District and the City of Riverside. With this information, the potential impact of the project can be evaluated within the context of the cumulative impact of all ongoing development. Based on our research, there are 20 cumulative projects in the City of Riverside that have either been built, but not yet fully occupied, or are being processed for approval. These 20 cumulative projects have been included as part of the cumulative background setting.

Table 3.9-5 provides the location and a brief description for each for the 20 cumulative projects. Exhibit 3.9-9 graphically illustrates the location of the 20 cumulative projects. These cumulative projects are expected to generate vehicular traffic, which may affect the operating conditions of the key study intersections.

Table 3.9-5: Location and Description of Cumulative Projects

No.	Cumulative Project	Address	Description/Size
City of Riverside			
1.	P14-0225/P14-0226/P14-0227/P16-0063	North of Dominion Avenue, between McMahon Street and Division Avenue	117 dwelling units (DU) Senior Apartment Complex
2.	P15-0404/P15-0405	3399 Adams Street	3,040-square-foot Gas Station (12 VFP), 4,159-square-foot Convenience Store, 2,080-squarefoot Car Wash
3.	P15-0478	3457 Arlington Avenue	7,686-square-foot Retail and 7,210-square-foot Restaurant
4.	P15-0847/P15-0848/P15-0850	3530 Madison Street	37,849-square-foot 24 Hour Fitness, 1,950-square-foot Starbucks with Drive-Thru, 41,117-square-foot Commercial
5.	P15-0979/P15-0980/P15-0981	5573 Arlington Avenue	2,200-square-foot Fast-Food Restaurant with Drive-Thru
6.	P16-0396/P16-0397/P17-0440	3640 Central Avenue	4,721-square-foot Chick-fil-A with Drive-thru
7.	P16-0413/P16-0414	7820 Lincoln Avenue	100,974-square-foot General Light Industrial
8.	P16-0423/P16-0424	6264 Nogales Street	7,030-square-foot Office and 4,140-square-foot Medical Office
9.	P16-0891/P16-0892/P16-0893/P17-0374	Madison Street at Railroad Avenue	18,900-square-foot Commercial Warehouse
10.	P17-0038	8043 Indiana Avenue	12,430-square-foot Automobile Sales (New)
11.	P17-0097/P17-0098/P17-0099/P17-0228	6289 Palm Avenue	99,172-square-foot Self-storage facility

Table 3.9-5 (cont.): Location and Description of Cumulative Projects

No.	Cumulative Project	Address	Description/Size
12.	P17-0100/P17-0105/P17-0559	3763 Tibbetts Street	2,500-square-foot Medical Office Building
13.	P17-0239/P17-0241	7979 Auto Drive	40,374-square-foot Walter Sprinter Dealership
14.	P17-0466/P17-0467/P17-0468/P17-0469/P17-0470/P17-0471/P17-0472	3575-3661 Merrill Avenue	108 DU Apartments and 1,200-square-foot Commercial
15.	P18-0151/P17-0585/P17-0586/P17-0755/P17-0756/P17-0757	3510-3522, 3536 Adams Street	12,500-square-foot Athletic Performance Center, 11,200-square-foot Recreation Center[1] 1,456-space Parking Structure[2]
16.	P17-0627/P17-0628	7434 Diamond Street	7,078-square-foot Church
17.	P17-0883/P17-0884/P17-0885	3490 Madison Street	17,889-square-foot Grocery Store, 8,065-square-foot Commercial
18.	P18-0104/P18-0105/P18-0106	8230 Magnolia Avenue	116 Bed Student Housing
19.	P18-0563/P18-0569	8432 Magnolia Avenue	1,198 Bed Student Housing
20.	Riverside Poly High School	Northwest corner of Central Avenue and Victoria Avenue	Baseball/softball fields on approximately 10 acres and redevelop 2.25 acres of existing softball field

Notes:
[1] The athletic performance center and recreation center are considered to be ancillary uses of Cal Baptist University and thus will not generate new traffic onto the roadway network.
[2] The forecasted trip generation potential of the parking structure is based on the anticipated student growth from Fall 2018 to Fall 2022, approximated to be an increase of 4,233 students.
Source: City of Riverside Community and Economic Development Department. 2018

Table 3.9-5 presents the traffic generation potential for the 20 cumulative projects. As shown in Table 3.9-6, the 20 cumulative projects are forecast to generate a combined total of 25,392 daily trips, with 1,447 trips (958 inbound and 489 outbound) forecast during the AM peak-hour and 2,024 trips (885 inbound and 1,139 outbound) forecast during the PM peak-hour.

Table 3.9-6: Cumulative Projects Trip Generation Forecast

No.	Cumulative Project Description	Daily 2-Way	AM Peak-hour			PM Peak-hour		
			Enter	Exit	Total	Enter	Exit	Total
1.	P14-0225/P14-0226/P14-0227/P16-0063	433	8	15	23	17	13	30
2.	P15-0404/P15-0405	1,848	29	28	57	38	36	74
3.	P15-0478	989	40	31	71	34	25	59

Table 3.9-6 (cont.): Cumulative Projects Trip Generation Forecast

No.	Cumulative Project Description	Daily 2-Way	AM Peak-hour			PM Peak-hour		
			Enter	Exit	Total	Enter	Exit	Total
4.	P15-0847/P15-0848/P15-0850	3,903	92	80	172	156	143	299
5.	P15-0979/P15-0980/P15-0981	777	23	22	45	18	18	36
6.	P16-0396/P16-0397/P17-0440	1,667	49	48	97	40	37	77
7.	P16-0413/P16-0414[1]	923	105	14	119	17	108	125
8.	P16-0423/P16-0424	212	16	4	20	5	17	22
9.	P16-0891/P16-0892/P16-0893/P17-0374	33	2	1	3	1	3	4
10.	P17-0038	346	17	6	23	12	18	30
11.	P17-0097/P17-0098/P17-0099/P17-0228	150	6	4	10	8	9	17
12.	P17-0100/P17-0105/P17-0559	87	5	2	7	3	6	9
13.	P17-0239/P17-0241[2]	331	16	6	22	11	18	29
14.	P17-0466/P17-0467/P17-0468/P17-0469/P17-0470/P17-0471/P17-0472[3]	772	21	46	67	47	32	79
15.	P18-0151 P17-0585/P17-0586/P17-0755/P17-0756/P17-0757[4]	6,096	320	61	381	228	238	466
16.	P17-0627/P17-0628	49	1	1	2	1	2	3
17.	P17-0883/P17-0884/P17-0885	1,993	41	27	68	64	62	126
18.	P18-0104/P18-0105/P18-0106	365	6	8	14	15	14	29
19.	P18-0563/P18-0569	3,774	59	85	144	150	150	300
20.	Riverside Poly High School[5]	644	102	0	102	20	190	210
Cumulative Projects Trip Generation Potential		**25,392**	**958**	**489**	**1,447**	**885**	**1,139**	**2,024**

Notes:
Unless otherwise noted; Source: Trip Generation, 10th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. 2017. Where applicable, pass-by adjustment factors were utilized and are reflected in the cumulative projects trip generation potential.

[1] Source: Traffic Impact Analysis Lincoln Avenue Industrial Warehouse, prepared by LSA, dated October 25, 2016.

[2] Source: Traffic Impact Analysis Report for Walter's Sprinter Dealership, prepared by LLG Engineers, dated April 30, 2018.

[3] Source: Draft Initial Study/MND for the Proposed Merrill Avenue Brownstones, prepared by Psomas, dated February 2018.

[4] The trip generation forecast for this cumulative project is based on the following trip generation rates, provided by City of Riverside staff, developed specifically for Cal Baptist University:
- Daily = 1.44 trips per student
- AM Peak-hour = 0.09 trips per student (84 percent Inbound, 16 percent Outbound)
- PM Peak-hour = 0.11 trips per student (49 percent Inbound, 51 percent Outbound)

[5] Source: Traffic Impact Analysis Report for Riverside Polytech High School Project, prepared by LLG Engineers, dated October 2018.

Year 2022 Traffic Volumes

Exhibit 3.9-10 and Exhibit 3.9-11 present the AM and PM peak-hour Existing Plus Ambient Growth to the Year 2022 traffic volumes at the 11 key study intersections. Exhibit 3.9-12 and Exhibit 3.9-13 present the AM and PM peak-hour Existing Ambient Growth to the Year 2022 Plus Project traffic volumes at the 11 key study intersections. Exhibit 3.9-14 and Exhibit 3.9-15 present Year 2022 Cumulative Plus Project AM and PM peak-hour traffic volumes at the 11 key study intersections.

Year 2040 Traffic Conditions

As requested by City of Riverside staff, the Year 2040 traffic volume forecasts for this traffic study were developed via the utilization of the SCAG Year 2040 Model provided by LSA. Specifically, AM peak-hour and PM peak-hour link traffic volumes were provided by LSA for the existing base year (i.e., Year 2012) and for the Year 2040. These future Year 2040 link traffic volumes were post processed based on the relationship of the base year validation model run output to the base year ground traffic counts resulting in Year 2040 without project AM peak-hour and PM peak-hour turning movements for the 11 key study intersections. It should be noted that each projected volume was reviewed carefully for reasonableness and adjustments were applied as warranted based on local conditions and professional judgment.

Copies of the model post-processing worksheets are contained in Appendix C of the TIA.

Year 2040 Traffic Volumes

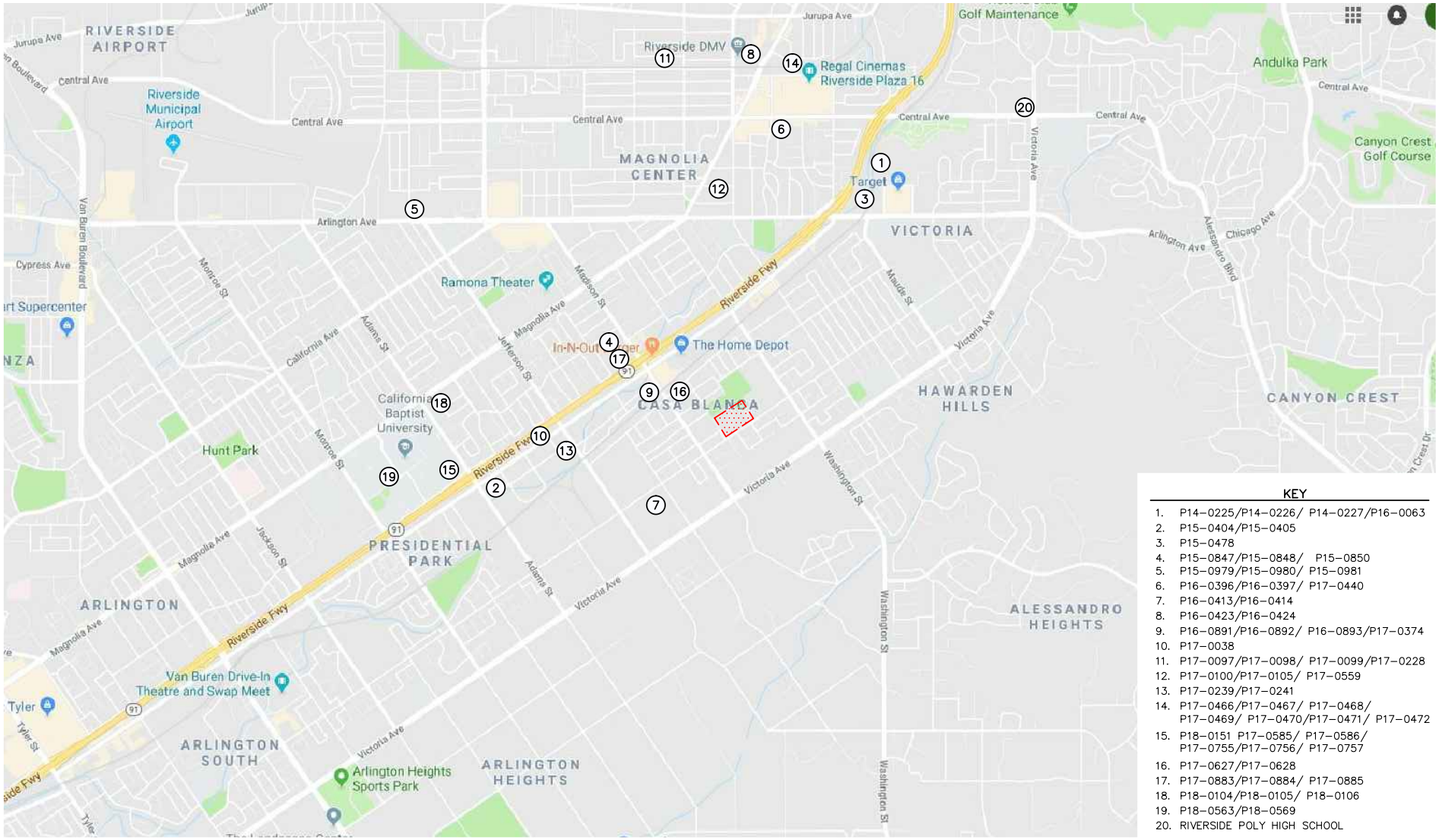
Exhibit 3.9-16 and Exhibit 3.9-17 present the Year 2040 buildout Am and PM peak-hour traffic volumes at the 11 key study intersections. Exhibit 3.9-18 and Exhibit 3.9-19 illustrate the Year 2040 buildout Plus Project AM and PM peak-hour traffic volumes at the 11 key study intersections.

Traffic Impact Analysis Methodology

The relative impact of the project during the AM peak-hour and PM peak-hour was evaluated based on analysis of future operating conditions at 11 key study intersections, without, then with, the project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at the key study intersections. The significance of the potential impacts of the project at the 11 key study intersections was then evaluated using the following traffic impact criteria.

Impact Criteria and Thresholds

The City of Riverside allows LOS “D” to be used as the maximum acceptable threshold for the study intersections and roadways of Collector or higher classification. However, at some key locations, such as City arterial roadways that are used as a freeway bypass by regional through traffic and at heavily traveled freeway interchanges, LOS “E” may be acceptable as determined on a case-by-case basis. Locations that may warrant the LOS “E” standard include portions of Arlington Avenue/Alessandro Boulevard, Van Buren Boulevard throughout the City, portions of La Sierra Avenue and selected freeway interchanges. The City also recognizes that along key freeway-feeder segments during peak commute hours, LOS F may be expected due to regional travel patterns.



KEY

1. P14–0225/P14–0226/ P14–0227/P16–0063
2. P15–0404/P15–0405
3. P15–0478
4. P15–0847/P15–0848/ P15–0850
5. P15–0979/P15–0980/ P15–0981
6. P16–0396/P16–0397/ P17–0440
7. P16–0413/P16–0414
8. P16–0423/P16–0424
9. P16–0891/P16–0892/ P16–0893/P17–0374
10. P17–0038
11. P17–0097/P17–0098/ P17–0099/P17–0228
12. P17–0100/P17–0105/ P17–0559
13. P17–0239/P17–0241
14. P17–0466/P17–0467/ P17–0468/ P17–0469/ P17–0470/P17–0471/ P17–0472
15. P18–0151 P17–0585/ P17–0586/ P17–0755/P17–0756/ P17–0757
16. P17–0627/P17–0628
17. P17–0883/P17–0884/ P17–0885
18. P18–0104/P18–0105/ P18–0106
19. P18–0563/P18–0569
20. RIVERSIDE POLY HIGH SCHOOL

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-9
Locations of Cumulative Projects

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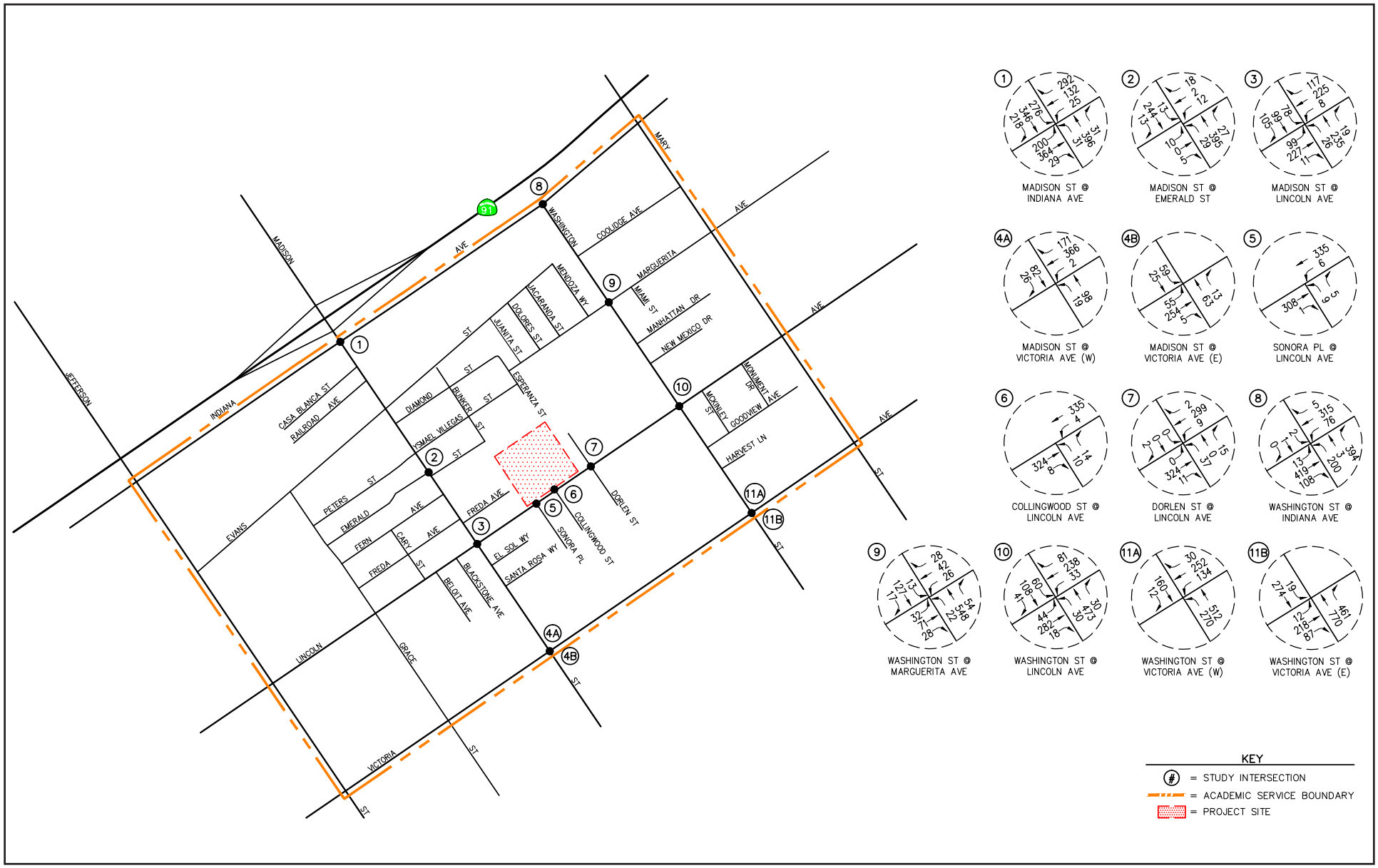

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-10
Existing Plus Ambient (Year 2022) AM Peak Hour Traffic Volumes

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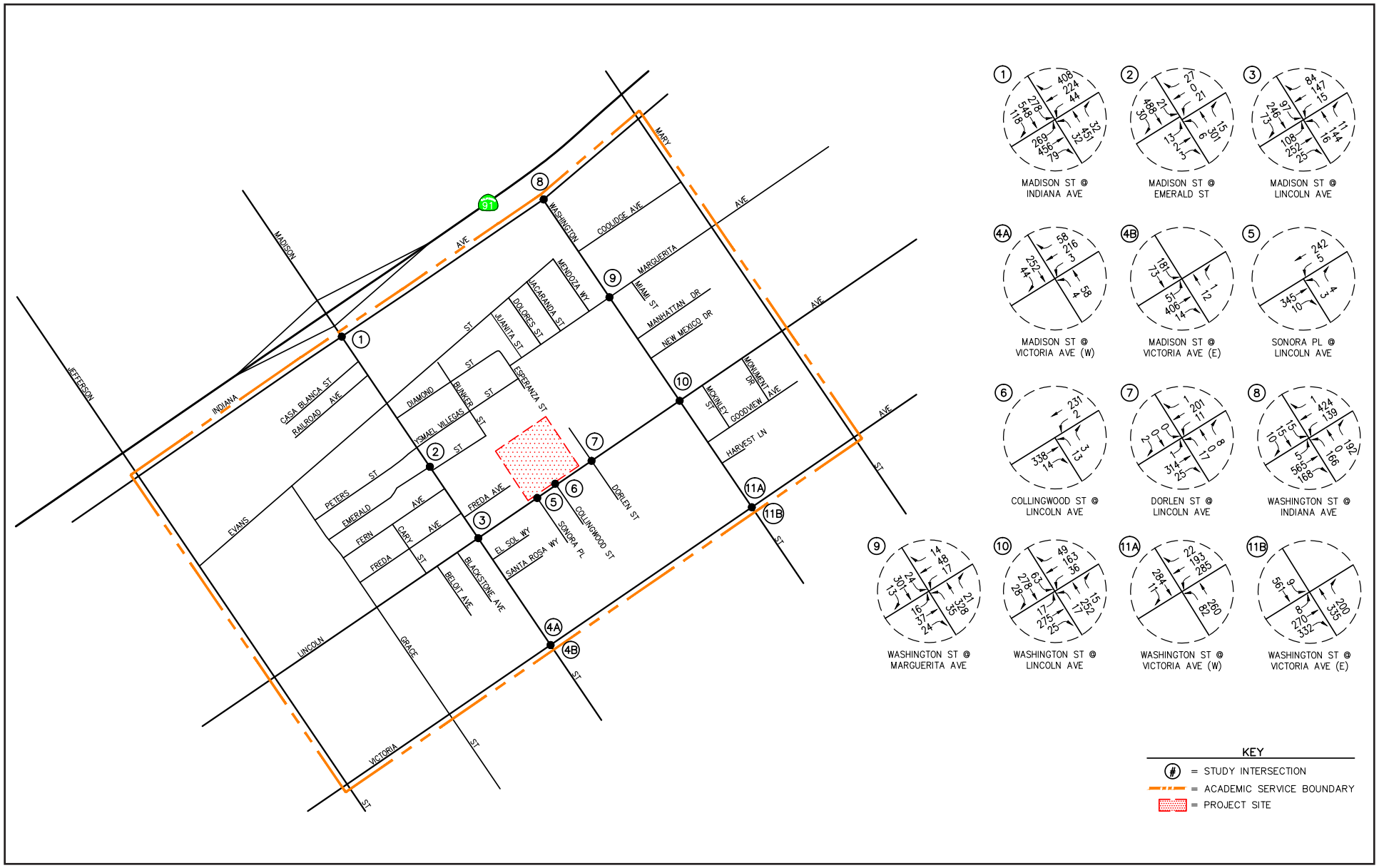

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-11
Existing Plus Ambient (Year 2022) PM Peak Hour Traffic Volumes

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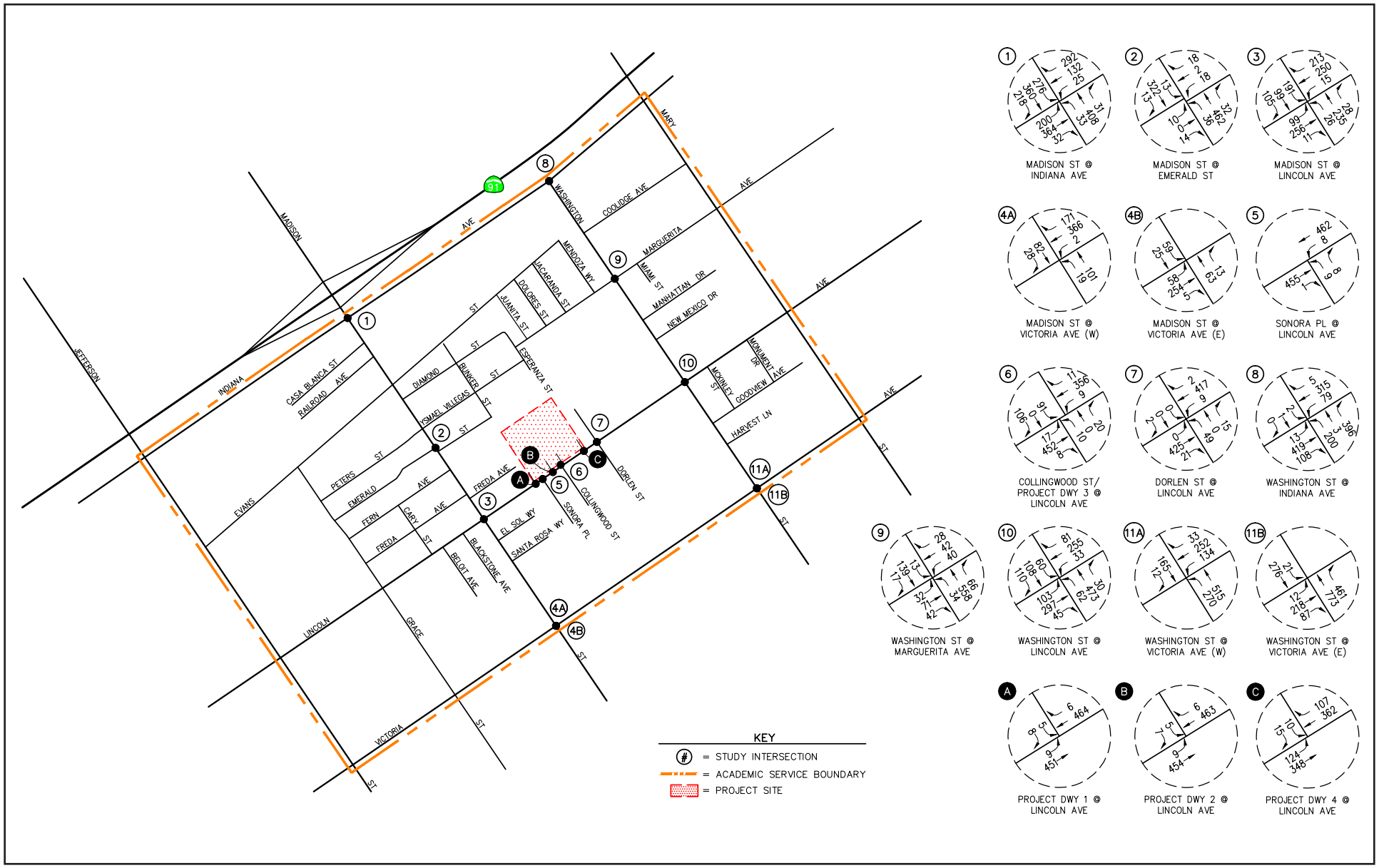

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-12
Existing Plus Ambient (Year 2022) Plus Project AM Peak Hour Traffic Volumes

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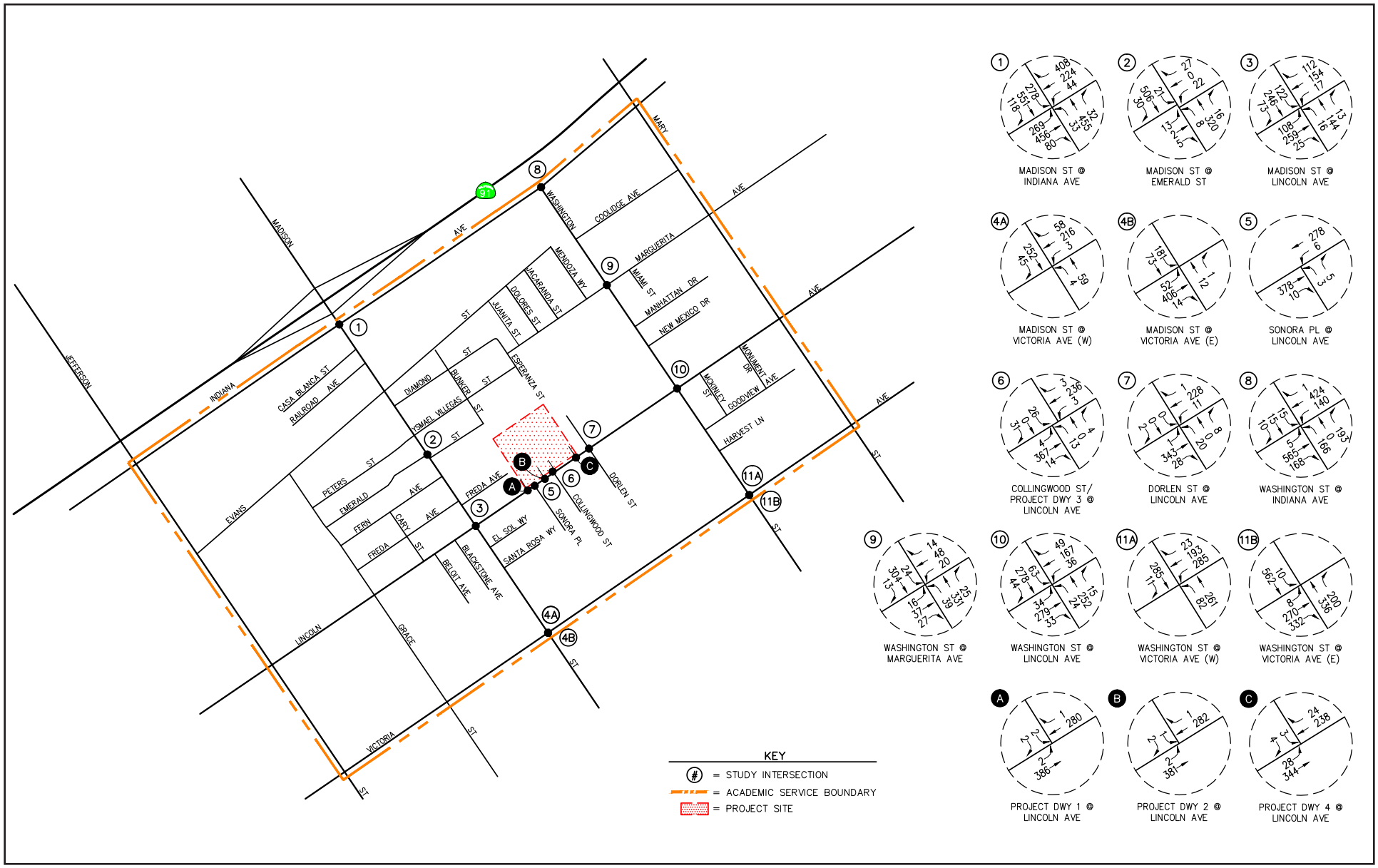

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-13
Existing Plus Ambient (Year 2022) Plus Project PM Peak Hour Traffic Volumes

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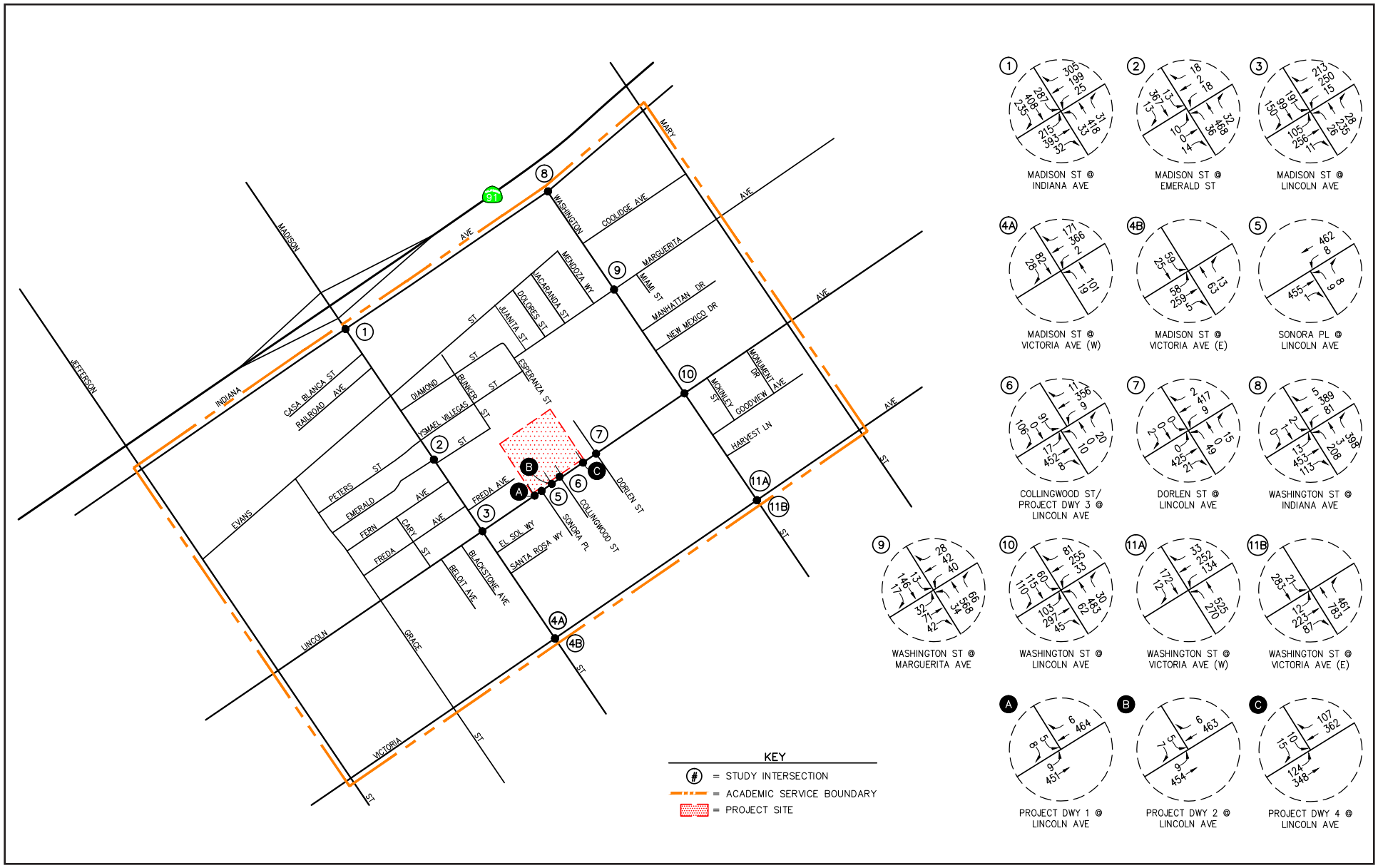

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-14
Year 2022 Plus Project AM Peak Hour Traffic Volumes (Cumulative Plus Project)

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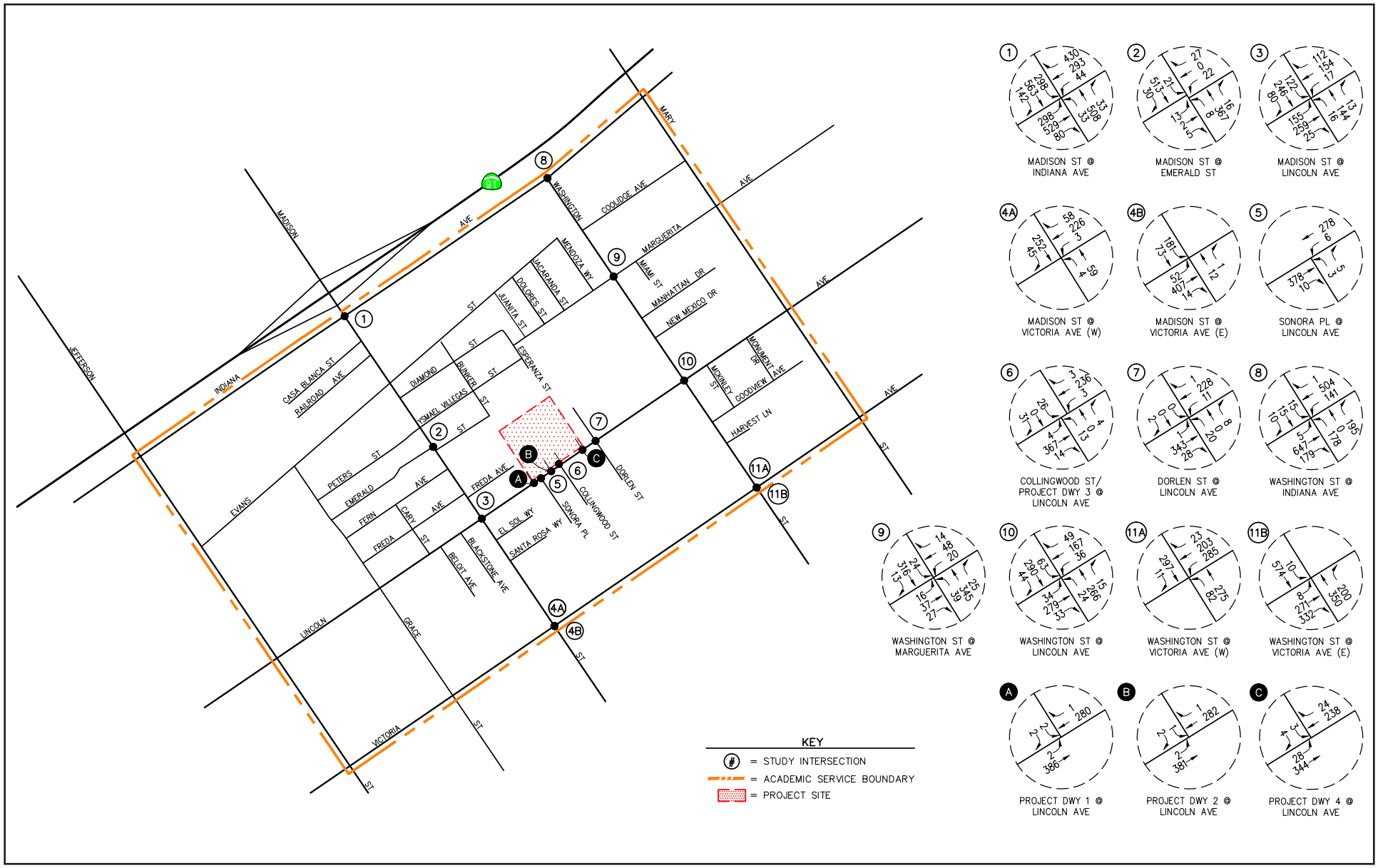

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-15
Year 2022 Plus Project PM Peak Hour Traffic Volumes (Cumulative Plus Project)

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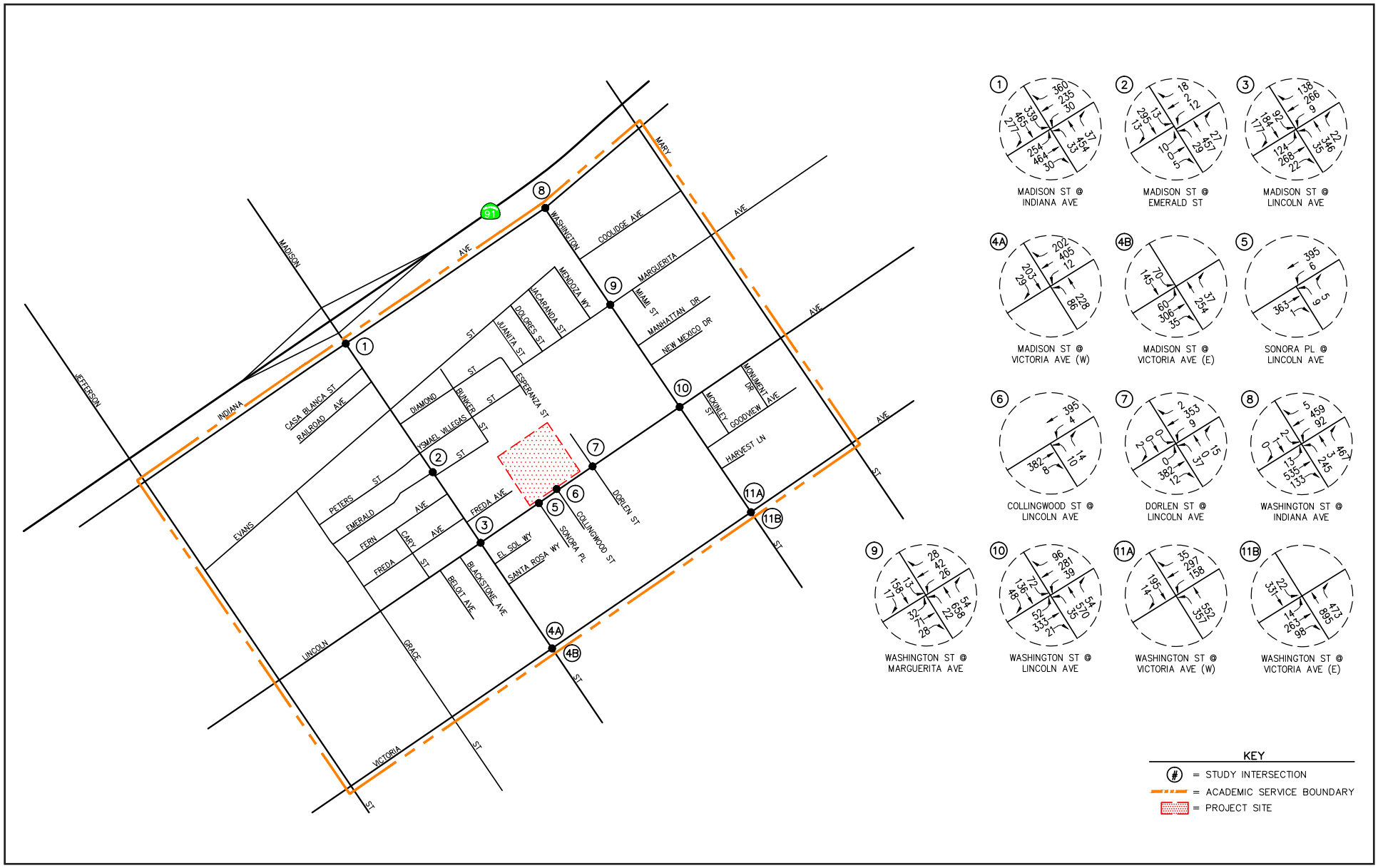

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-16
Year 2040 Buildout AM Peak Hour Traffic Volumes

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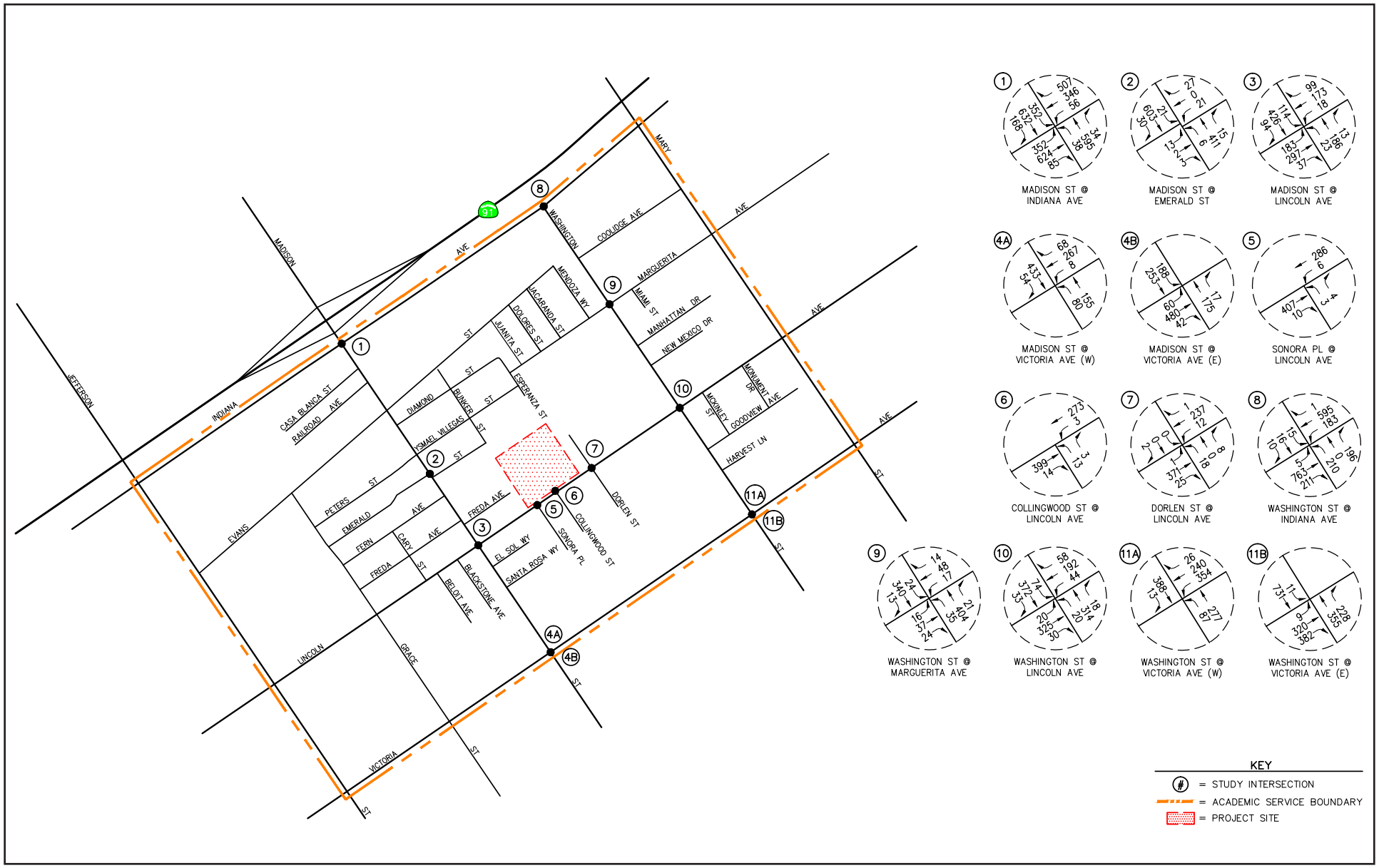

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-17
Year 2040 Buildout PM Peak Hour Traffic Volumes

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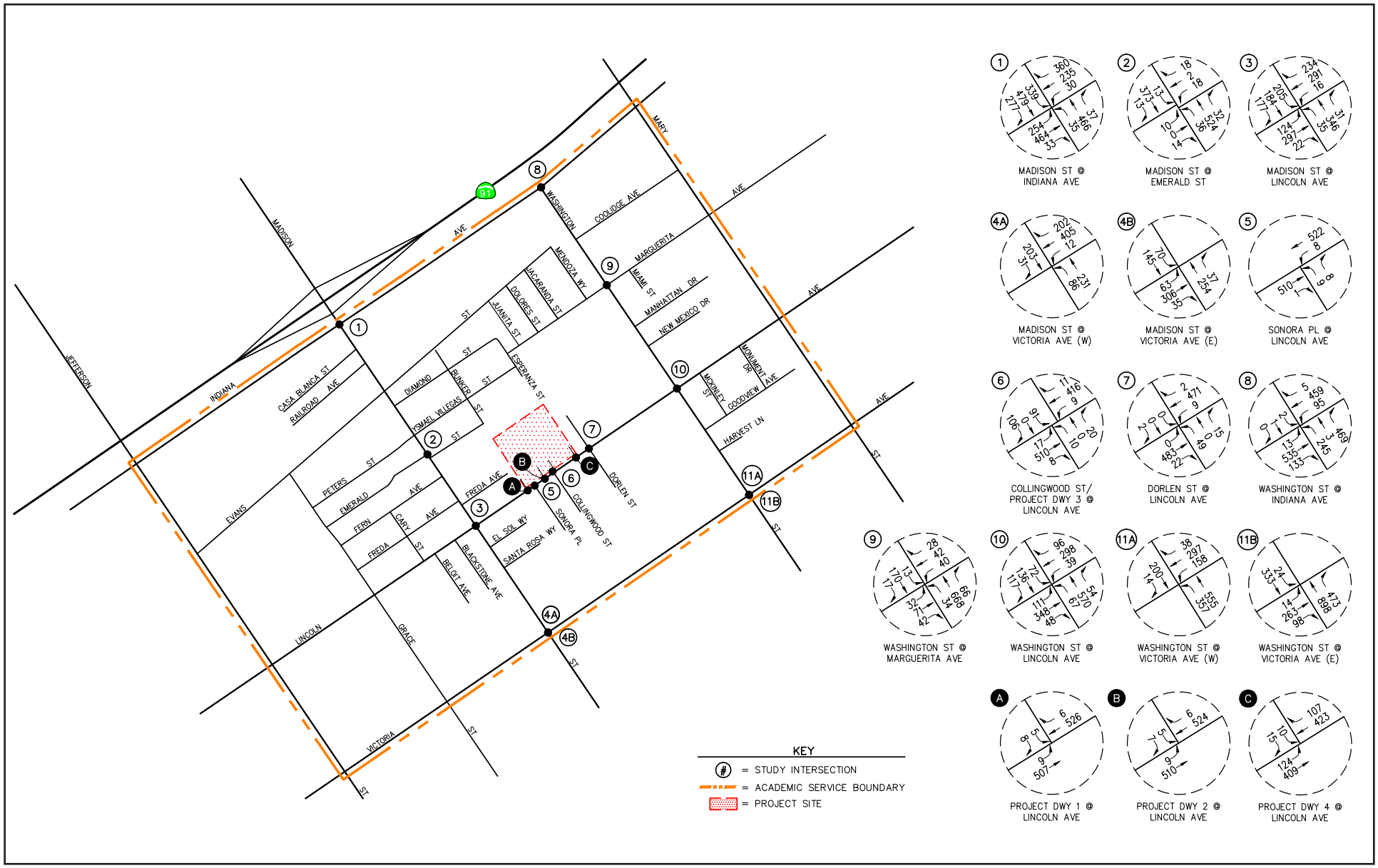

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-18
Year 2040 Buildout Plus Project AM Peak Hour Traffic Volumes

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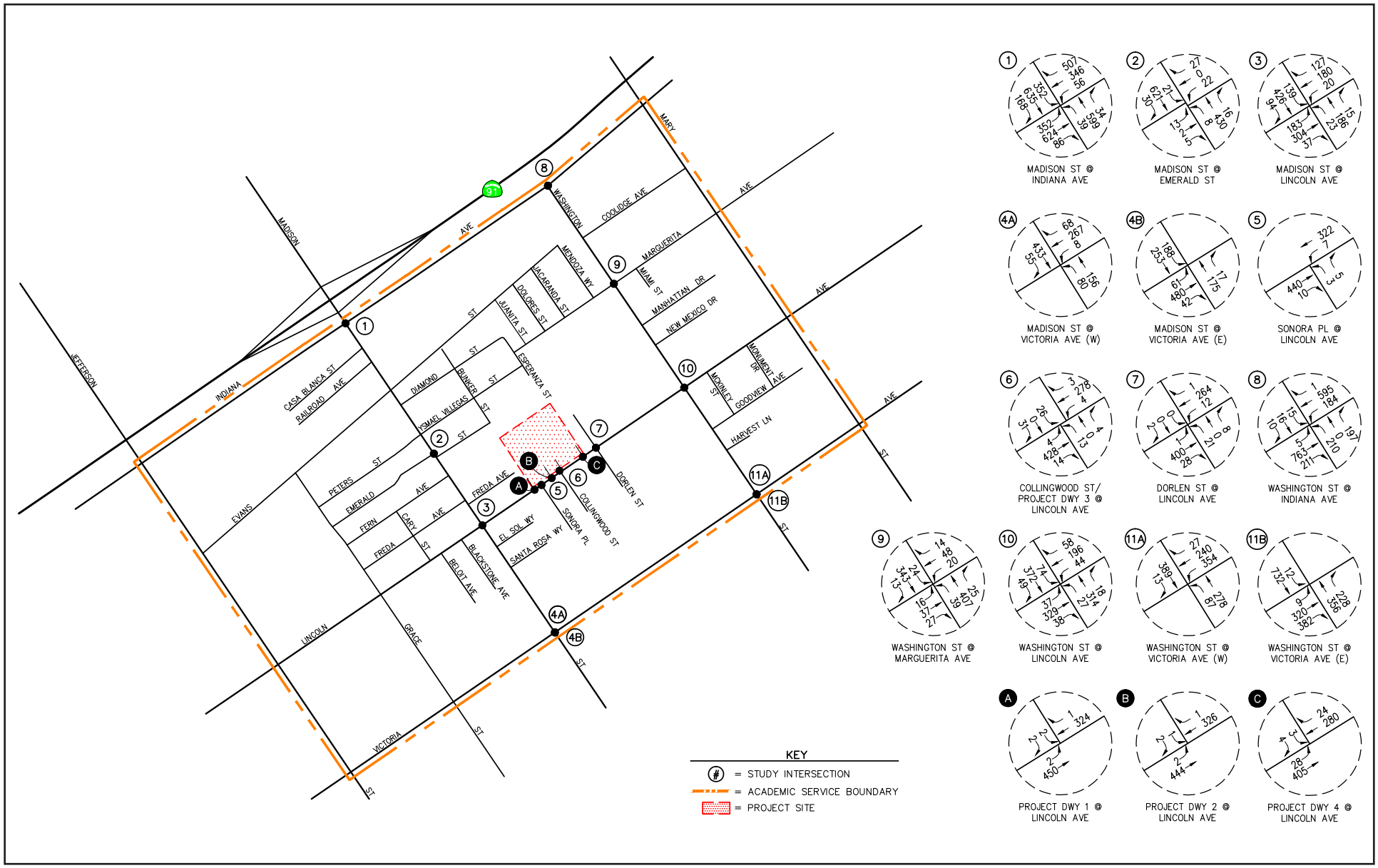

Source: Linscott Law & Greenspan Engineers, November 2018.

FIRSTCARBON SOLUTIONS™

Exhibit 3.9-19
Year 2040 Buildout Plus Project PM Peak Hour Traffic Volumes

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A higher standard, such as LOS "C" or better, may be adopted for local streets in residential areas. Based on the above, LOS D is required for the 11 key study intersections.

A significant impact occurs at a study intersection when the addition of project generated trips causes peak-hour LOS to degrade from acceptable LOS to unacceptable LOS.

Traffic Impact Analysis Scenarios

The following scenarios are those for which volume. Capacity calculations have been performed at the 11 key study intersections for Existing Plus Project, near-term (Year 2022) and long-term (Year 2040) traffic conditions:

a) Existing Traffic Conditions;
b) Existing Plus Project Traffic Conditions;
c) Scenario (B) with Improvements, if necessary;
d) Existing Plus A.G. (Ambient Growth) to the Year 2022 Traffic Conditions;
e) Existing Plus A.G. to the Year 2022 Plus Project Traffic Conditions;
f) Scenario (F) with Improvements, if necessary;
g) Existing Plus A.G. Plus Project Plus Cumulative Traffic Conditions;
h) Scenario (G) with Improvements, if necessary;
i) Year 2040 Buildout Traffic Conditions;
j) Year 2040 Buildout Plus Project Traffic Conditions; and
k) Scenario (J) with Improvements, if necessary.

Peak-hour Intersection Capacity Analysis

Existing Plus Project Traffic Conditions

Table 3.9-7 summarizes the peak-hour level of service results at the 11 key study intersections for "Existing Plus Project" traffic conditions. The first column (1) of HCM/LOS values in Table 3.9-7 presents a summary of existing AM and PM peak-hour traffic conditions (which were also presented in Table 3.9-3). The second column (2) lists existing Plus Project traffic conditions. The third column (3) indicates whether the traffic association with the project will have a significant impact based on the significance criteria defined in this Draft Focused EIR. The fourth (4) column indicates the anticipated operating conditions with implementation of improvements recommended to mitigate project traffic and/or achieve an acceptable Level of Service, if any.

Table 3.9-7: Existing Plus Project Peak-hour Intersection Capacity Analysis Summary

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact	(4) Existing Plus Project With Improvements	
				HCM	LOS	HCM	LOS	Yes/No	HCM	LOS
1.	Madison Street at Indiana Avenue	AM PM	LOS D	34.9 s/v 33.7 s/v	C C	35.0 s/v 33.8 s/v	C C	No No	— —	— —
2.	Madison Street at Emerald Street	AM PM	LOS D	15.2 s/v 15.3 s/v	C C	23.7 s/v 16.5 s/v	C C	No No	— —	— —
3.	Madison Street at Lincoln Avenue	AM PM	LOS D	22.9 s/v 23.8 s/v	C C	26.0 s/v 24.1 s/v	C C	No No	— —	— —
4A.	Madison Street at Victoria Avenue (West)	AM PM	LOS D	13.0 s/v 9.4 s/v	B A	13.0 s/v 9.4 s/v	B A	No No	— —	— —
4B.	Madison Street at Victoria Avenue (East)	AM PM	LOS D	9.2 s/v 12.1 s/v	A B	9.2 s/v 12.2 s/v	A B	No No	— —	— —
5.	Sonora Place at Lincoln Avenue	AM PM	LOS D	12.4 s/v 11.9 s/v	B B	14.9 s/v 12.4 s/v	B B	No No	— —	— —
6.	Collingwood Street at Lincoln Avenue	AM PM	LOS D	12.4 s/v 12.7 s/v	B B	24.6 s/v 13.9 s/v	C B	No No	— —	— —
7.	Dorlen Street at Lincoln Avenue	AM PM	LOS D	15.5 s/v 12.5 s/v	C B	23.8 s/v 13.4 s/v	C B	No No	— —	— —
8.	Washington Street at Indiana Avenue	AM PM	LOS D	18.1 s/v 15.8 s/v	B B	18.2 s/v 15.8 s/v	B B	No No	— —	— —
9.	Washington Street at Marguerita Avenue	AM PM	LOS D	33.0 s/v 11.8 s/v	**D** **B**	**47.0 s/v** **12.1 s/v**	**E** B	**Yes** No	N.F. N.F.	N.F. N.F.
10.	Washington Street at Lincoln Avenue	AM PM	LOS D	**46.7 s/v** 18.1 s/v	**E** C	**96.9 s/v** 21.2 s/v	**F** C	**Yes** No	13.6 s/v 11.6 s/v	B B
11A.	Washington Street at Victoria Avenue (West)	AM PM	LOS D	13.1 s/v 11.0 s/v	B B	13.1 s/v 11.1 s/v	B B	No No	— —	— —

Table 3.9-7 (cont.): Existing Plus Project Peak-hour Intersection Capacity Analysis Summary

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact	(4) Existing Plus Project With Improvements	
				HCM	LOS	HCM	LOS	Yes/No	HCM	LOS
11B.	Washington Street at Victoria Avenue (East)	AM	LOS D	13.0 s/v	B	13.1 s/v	B	No	—	—
		PM		15.7 s/v	C	15.7 s/v	C	No	—	—

Notes:
LOS = Level of Service, please refer to Tables 3.8-1 and 3.8-2 for the LOS definitions
Bold Delay/LOS values indicate adverse service levels based on City of Riverside LOS standards
s/v = seconds per vehicle
N.F. = None Feasible

Existing Plus Project Traffic Conditions

Review of columns 2 and 3 of Table 3.9-7 indicates that traffic associated with the project will significantly impact two of the 11 key study intersections, when compared to the LOS standards and significance criteria specified in this Draft Focused EIR. The remaining nine key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project-generated traffic to existing traffic. The two locations projected to operate at an unacceptable LOS with the addition of project traffic to existing traffic are shown in Table 3.9-8.

Table 3.9-8: Existing plus Project Traffic Conditions Unacceptable LOS Intersections

Key Intersection	AM Peak-hour		PM Peak-hour	
	HCM	LOS	HCM	LOS
9. Washington Street at Marguerita Avenue	47.0 s/v	E	—	—
10. Washington Street at Lincoln Avenue	96.9 s/v	F	—	—

As shown in Table 3.9-7, column 4, the implementation of improvements (discussed later in this report) at the impacted key study intersection of Washington Street/Lincoln Avenue completely offsets the impact of project traffic and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak-hours. For the remaining impacted key study intersection of Washington Street/Marguerita Avenue, additional capacity-enhancing improvements at this key study intersection do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impact at this location will remain significant.

Appendix D of the TIA presents the Existing Plus Project HCM/LOS calculations for the 11 key study intersections.

Year 2022 Traffic Conditions

Table 3.9-9 summarizes the pear hour level of service results at the 11 key study intersections for “Year 2022” traffic conditions. The first column (1) of HCM/LOS values in Table 3.9-8 presents Year 2022 plus ambient growth traffic conditions based on existing intersection geometry, but without any traffic generated from the project. The second column (2) presents the forecast Year 2022 plus ambient growth traffic conditions with the addition of project traffic. The third column (3) indicates whether the traffic association with the project will have a significant impact based on the significance criteria defined in this Draft Focused EIR. The fourth column (4) indicates the anticipated operating conditions with implementation of improvements recommended to mitigate project traffic and/or achieve an acceptable Level of Service. The fifth column (5) lists Year 2022 Plus Ambient Growth plus Project plus Cumulative Project traffic conditions (i.e., the cumulative scenario). The sixth column (6) indicates whether the traffic associated with the project will have a significant “cumulative” impact based on the significance criteria defined in this Draft Focused EIR. The seventh column (7) indicates the anticipated operating conditions with implementation of recommended improvements, if any.

Table 3.9-9: Year 2022 Peak-hour Intersection Capacity Analysis Summary

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Plus A.G. (Year 2022) Traffic Conditions		(2) Existing Plus Ambient Growth (Year 2022) Plus Project Traffic Conditions		(3) Significant Impact	(4) Existing Plus Ambient Growth (Year 2022) Plus Project W/Improvements		(5) Existing Plus A.G. (Year 2022) Plus Project Plus Cumulative Traffic Conditions		(6) Year 2022 Cumulative Impact	(7) Year 2022 Cumulative W/Improvements	
				HCM	LOS	HCM	LOS	Yes/No	HCM	LOS	HCM	LOS	Yes/No	HCM	LOS
1.	Madison Street at Indiana Avenue	AM	LOS D	34.8 s/v	C	34.9 s/v	C	No	—	—	35.0 s/v	D	No	—	—
		PM		35.8 s/v	D	35.8 s/v	D	No	—	—	38.1 s/v	D	No	—	—
2.	Madison Street at Emerald Street	AM	LOS D	12.6 s/v	B	16.0 s/v	C	No	—	—	17.2 s/v	C	No	—	—
		PM		17.3 s/v	C	18.9 s/v	C	No	—	—	20.2 s/v	C	No	—	—
3.	Madison Street at Lincoln Avenue	AM	LOS D	22.8 s/v	C	25.7 s/v	C	No	—	—	25.9 s/v	C	No	—	—
		PM		24.0 s/v	C	24.3 s/v	C	No	—	—	25.0 s/v	C	No	—	—
4A.	Madison Street at Victoria Ave (W)	AM	LOS D	13.2 s/v	B	13.2 s/v	B	No	—	—	13.2 s/v	B	No	—	—
		PM		9.5 s/v	A	9.5 s/v	A	No	—	—	9.6 s/v	A	No	—	—
4B.	Madison Street at Victoria Ave (E)	AM	LOS D	9.2 s/v	A	9.3 s/v	A	No	—	—	9.3 s/v	A	No	—	—
		PM		12.7 s/v	B	12.7 s/v	B	No	—	—	12.7 s/v	B	No	—	—
5.	Sonora Place at Lincoln Avenue	AM	LOS D	12.7 s/v	B	15.3 s/v	C	No	—	—	15.3 s/v	C	No	—	—
		PM		11.6 s/v	B	12.0 s/v	B	No	—	—	12.0 s/v	B	No	—	—
6.	Collingwood St at Lincoln Avenue	AM	LOS D	12.1 s/v	B	27.8 s/v	D	No	—	—	27.8 s/v	D	No	—	—
		PM		12.7 s/v	B	14.6 s/v	B	No	—	—	14.6 s/v	B	No	—	—
7.	Dorlen Street at Lincoln Avenue	AM	LOS D	14.9 s/v	B	21.2 s/v	C	No	—	—	21.2 s/v	C	No	—	—
		PM		13.0 s/v	B	13.9 s/v	B	No	—	—	13.9 s/v	B	No	—	—
8.	Washington St at Indiana Avenue	AM	LOS D	18.5 s/v	B	18.6 s/v	B	No	—	—	18.4 s/v	B	No	—	—
		PM		15.7 s/v	B	15.8 s/v	B	No	—	—	15.9 s/v	B	No	—	—
9.	Washington St at Marguerita Ave	AM	LOS D	25.8 s/v	D	**35.0 s/v**	**E**	**Yes**	N.F.	N.F.	**38.1 s/v**	**E**	**Yes**	N.F.	N.F.
		PM		12.6 s/v	B	12.9 s/v	B	No	N.F.	N.F.	13.4 s/v	B	No	N.F.	N.F.
10.	Washington St at Lincoln Avenue	AM	LOS D	**60.8 s/v**	**F**	**113.6 s/v**	**F**	**Yes**	14.1 s/v	B	**119.4 s/v**	**F**	**Yes**	14.2 s/v	B
		PM		22.9 s/v	C	28.2 s/v	D	No	11.7 s/v	B	32.2 s/v	D	No	11.6 s/v	B

Table 3.9-9 (cont.): Year 2022 Peak-hour Intersection Capacity Analysis Summary

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Plus A.G. (Year 2022) Traffic Conditions		(2) Existing Plus Ambient Growth (Year 2022) Plus Project Traffic Conditions		(3) Significant Impact	(4) Existing Plus Ambient Growth (Year 2022) Plus Project W/Improvements		(5) Existing Plus A.G. (Year 2022) Plus Project Plus Cumulative Traffic Conditions		(6) Year 2022 Cumulative Impact	(7) Year 2022 Cumulative W/Improvements	
				HCM	LOS	HCM	LOS	Yes/No	HCM	LOS	HCM	LOS	Yes/No	HCM	LOS
11A.	Washington St at Victoria Ave (W)	AM	LOS D	13.3 s/v	B	13.4 s/v	B	No	—	—	13.5 s/v	B	No	—	—
		PM		11.7 s/v	B	11.7 s/v	B	No	—	—	11.9 s/v	B	No	—	—
11B.	Washington St at Victoria Ave (E)	AM	LOS D	13.3 s/v	B	13.3 s/v	B	No	—	—	13.6 s/v	B	No	—	—
		PM		18.8 s/v	C	18.9 s/v	C	No	—	—	19.7 s/v	C	No	—	—

Notes:
LOS = Level of Service, please refer to Tables 3.8-1and 3.8-2 for the LOS definitions
s/v = seconds per vehicle
A.G. = ambient growth
N.F. = None Feasible

Existing Plus Ambient Growth to the Year 2022 Traffic Conditions

As shown in column 1 of Table 3.9-9, the addition of ambient growth traffic will adversely impact the intersection of Washington Street/Lincoln Avenue. The intersection of Washington Street/Lincoln Avenue is forecast to operate at unacceptable LOS F during the AM peak-hour with the addition of ambient growth traffic. The remaining ten (10) key study intersections are forecast to continue to operate at an acceptable service level during the AM and PM peak-hours with the addition of ambient growth traffic to existing traffic.

Existing Plus Ambient Growth to the Year 2022 Plus Project Traffic Conditions

Review of columns 2 and 3 of Table 3.9-9 indicates that traffic associated with the project will significantly impact two of the 11 key study intersections, when compared to the LOS standards and significance criteria specified in this report. The remaining nine key study intersections are forecast to continue to operate at an acceptable service level during the AM and PM peak-hours with the addition of ambient growth and project generated traffic in the Year 2022.

The two locations projected to operate at an unacceptable LOS are shown in Table 3.9-10.

Table 3.9-10: Existing Plus Ambient Growth to the Year 2022 Plus Project Unacceptable LOS Locations

Key Intersection	AM Peak-hour		PM Peak-hour	
	HCM	LOS	HCM	LOS
9. Washington Street at Marguerita Avenue	35.0 s/v	E	—	—
10. Washington Street at Lincoln Avenue	13.6 s/v	F	—	—

As shown in column 4, the implementation of improvements (discussed later in this report) at the impacted key study intersection of Washington Street/Lincoln Avenue completely offsets the impact of project traffic and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak-hours. For the remaining impacted key study intersection of Washington Street/Marguerita Avenue, additional capacity-enhancing improvements at this key study intersection do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impact at this location will remain significant.

Year 2022 Cumulative Traffic Conditions

Review of columns 5 and 6 of Table 3.9-9 indicates that traffic associated with the project will cumulatively impact two of the 11 key study intersections, when compared to the LOS standards and significance criteria specified in this Draft Focused EIR. The remaining nine key study intersections are forecast to continue to operate at an acceptable service level during the AM and PM peak-hours with the addition of ambient growth, cumulative, and project generated traffic in the Year 2022.

The two locations projected to operate at an unacceptable LOS are shown in Table 3.9-11.

Table 3.9-11: Year 2022 Cumulative Traffic Conditions Unacceptable LOS Locations

Key Intersection	AM Peak-hour		PM Peak-hour	
	HCM	LOS	HCM	LOS
9. Washington Street at Marguerita Avenue	38.1 s/v	E	—	—
10. Washington Street at Lincoln Avenue	119.4 s/v	F	—	—

As shown in column 7, the implementation of improvements (discussed later in this report) at the impacted key study intersection of Washington Street/Lincoln Avenue completely offsets the impact of project traffic and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak-hours. For the remaining impacted key study intersection of Washington Street/Marguerita Avenue, additional capacity-enhancing improvements at this key study intersection do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impact at this location will remain significant. Appendix E of the TIA presents the Year 2022 Plus Project HCM/LOS calculations for the 11 key study intersections.

Year 2040 Buildout Traffic Conditions

Table 3.9-12 summarizes the peak-hour level of service results at the 11 key study intersections for "Year 2040 Buildout Plus Project" traffic conditions. The first column (1) lists Year 2040 buildout traffic conditions, but without any traffic generated from the project. The second column (2) presents Year 2040 buildout traffic conditions with the addition of project traffic. The third column (3) indicates whether the traffic associated with the project will have a significant impact based on the significance criteria defined in this Draft Focused EIR. The fourth column (4) indicates the anticipated operating conditions with implementation of improvements recommended to mitigate project traffic and/or achieve an acceptable LOS.

Year 2040 Buildout Traffic Conditions

Review of column 1 of Table 3.9-12 shows that projected Year 2040 buildout without project traffic will adversely impact two of the 11 key study intersections. The remaining nine key study intersections are forecast to operate at an acceptable LOS for Year 2040 buildout without project traffic conditions.

Table 3.9-12: Year 2040 Buildout Peak-hour Intersection Capacity Analysis Summary

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Year 2040 Buildout Traffic Conditions		(2) Year 2040 Buildout Plus Project Traffic Conditions		(3) Significant Impact	(4) Year 2040 Buildout Plus Project With Improvements	
				HCM	LOS	HCM	LOS	Yes/No	HCM	LOS
1.	Madison Street at Indiana Avenue	AM	LOS D	37.3 s/v	D	37.3 s/v	D	No	—	—
		PM		51.9 s/v	D	52.4 s/v	D	No	—	—
2.	Madison Street at Emerald Street	AM	LOS D	13.9 s/v	B	18.3 s/v	C	No	—	—
		PM		26.4 s/v	D	29.8 s/v	D	No	—	—
3.	Madison Street at Lincoln Avenue	AM	LOS D	25.0 s/v	C	27.7 s/v	C	No	—	—
		PM		29.0 s/v	C	29.2 s/v	C	No	—	—
4A.	Madison Street at Victoria Avenue (West)	AM	LOS D	19.8 s/v	C	19.8 s/v	C	No	—	—
		PM		12.3 s/v	B	12.3 s/v	B	No	—	—
4B.	Madison Street at Victoria Avenue (East)	AM	LOS D	11.2 s/v	B	11.2 s/v	B	No	—	—
		PM		20.3 s/v	C	20.4 s/v	C	No	—	—
5.	Sonora Place at Lincoln Avenue	AM	LOS D	13.5 s/v	B	16.2 s/v	C	No	—	—
		PM		12.2 s/v	B	12.5 s/v	B	No	—	—
6.	Collingwood Street at Lincoln Avenue	AM	LOS D	12.7 s/v	B	31.3 s/v	D	No	—	—
		PM		13.4 s/v	B	15.6 s/v	C	No	—	—
7.	Dorlen Street at Lincoln Avenue	AM	LOS D	16.2 s/v	C	23.1 s/v	C	No	—	—
		PM		13.8 s/v	B	14.8 s/v	B	No	—	—
8.	Washington Street at Indiana Avenue	AM	LOS D	19.7 s/v	B	19.8 s/v	B	No	—	—
		PM		17.3 s/v	B	17.3 s/v	B	No	—	—
9.	Washington Street at Marguerita Avenue	AM	LOS D	**41.2 s/v**	**E**	**54.8 s/v**	**F**	**Yes**	N.F.	N.F.
		PM		14.0 s/v	B	14.5 s/v	B	No	N.F.	N.F.
10.	Washington Street at Lincoln Avenue	AM	LOS D	**127.1 s/v**	**F**	**181.4 s/v**	**F**	**Yes**	17.8 s/v	B
		PM		**55.6 s/v**	**F**	**70.2 s/v**	**F**	**Yes**	12.0 s/v	B
11A.	Washington Street at Victoria Avenue (West)	AM	LOS D	15.1 s/v	C	15.2 s/v	C	No	—	—
		PM		13.8 s/v	B	13.8 s/v	B	No	—	—
11B.	Washington Street at Victoria Avenue (East)	AM	LOS D	14.8 s/v	B	14.9 s/v	B	No	—	—
		PM		34.2 s/v	D	34.6 s/v	D	No	—	—

Table 3.9-12 (cont.): Year 2040 Buildout Peak-hour Intersection Capacity Analysis Summary

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Year 2040 Buildout Traffic Conditions		(2) Year 2040 Buildout Plus Project Traffic Conditions		(3) Significant Impact	(4) Year 2040 Buildout Plus Project With Improvements	
			HCM	LOS	HCM	LOS	Yes/No	HCM	LOS
Notes: LOS = Level of Service, please refer to Tables 3-1 and 3-2 for the LOS definitions **Bold Delay/LOS** values indicate adverse service levels based on City of Riverside LOS standards s/v = seconds per vehicle N.F. = None Feasible									

As shown in column 4, the implementation of improvements (discussed later in this report) at the impacted key study intersection of Washington Street/Lincoln Avenue completely offsets the impact of project traffic and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak-hours. For the remaining impacted key study intersection of Washington Street/Marguerita Avenue, additional capacity-enhancing improvements at this key study intersection do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impact at this location will remain significant Appendix F of the TIA presents the Year 2040 Plus Project HCM/LOS calculations for the 11 key study intersections.

The two locations projected to operate at an unacceptable LOS under year 2040 buildout conditions are shown in Table 3.9-13.

Table 3.9-13: Year 2040 Buildout Unacceptable LOS Locations

Key Intersection	AM Peak-hour		PM Peak-hour	
	HCM	LOS	HCM	LOS
9. Washington Street at Marguerita Avenue	41.2 s/v	E	—	—
10. Washington Street at Lincoln Avenue	127.1 s/v	F	55.6 s/v	F

Year 2040 Buildout Plus Project Traffic Conditions

Review of Columns 2 and 3 of Table 3.9-12 indicates that the added traffic associated with the project will significantly impact two of the 11 key study intersections, when compared to the LOS standards and significance criteria specified in this Draft Focused EIR. The remaining nine key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project-generated traffic in the Year 2040. The two locations projected to operate at an unacceptable LOS are shown in Table 3.9-14.

Table 3.9-14: Year 2040 Buildout Plus Project Unacceptable LOS Locations

Key Intersection	AM Peak-hour		PM Peak-hour	
	HCM	LOS	HCM	LOS
9. Washington Street at Marguerita Avenue	54.8 s/v	F	—	—
10. Washington Street at Lincoln Avenue	181.4 s/v	F	70.2 s/v	F

Site Access and Internal Circulation Evaluation

Site Access Evaluation

Access to the project site will be provided via four full-access unsignalized driveways located along Lincoln Avenue. The westerly project driveway is referred to as Project Driveway No. 1. The project driveway located between Sonora Place and Collingwood Street is referred to as Project Driveway No. 2. Project Driveway No. 3 is located opposite of Collingwood Street (slightly offset to the east), and the easterly project driveway is referred to as Project Driveway No. 4.

Project Driveway No. 3 shall be directly aligned (i.e., centerline to centerline) with Collingwood Street to minimize conflicting vehicular movements.

Table 3.9-15 summarizes the intersection operations at the project driveways for Year 2022 Cumulative Plus Project traffic conditions and for Year 2040 Buildout Plus Project traffic conditions at project completion. The operations analysis for the project driveways is based on the Highway Capacity Manual 6th Edition (HCM 6) unsignalized methodology. Review of Table 3.9-15 shows that the project driveways are forecast to operate at acceptable LOS D or better during the AM and PM peak-hours for Year 2022 Cumulative Plus Project traffic conditions and for Year 2040 Buildout Plus Project traffic conditions. As such, project access will be adequate. Motorists entering and exiting the project site will be able to do so comfortably, safely, and without undue congestion.

Appendix G of the TIA presents the level of service calculation worksheets for the project driveways under Year 2022 Cumulative Plus Project and Year 2040 Buildout Plus Project traffic conditions.

Table 3.9-15: Project Driveway Peak-hour Levels of Service Summary

Project Driveway		Time Period	Intersection Control	Year 2022 Plus Project Traffic Conditions		Year 2040 Buildout Plus Project Traffic Conditions	
				HCM	LOS	HCM	LOS
A.	Project Driveway No. 1 at Lincoln Avenue	AM PM	One–Way Stop	14.2 s/v 12.0 s/v	B B	15.0 s/v 12.5 s/v	B B
B.	Project Driveway No. 2 at Lincoln Avenue	AM PM	One–Way Stop	14.4 s/v 11.2 s/v	B B	15.2 s/v 11.7 s/v	C B

Table 3.9-15 (cont.): Project Driveway Peak-hour Levels of Service Summary

Project Driveway		Time Period	Intersection Control	Year 2022 Plus Project Traffic Conditions		Year 2040 Buildout Plus Project Traffic Conditions	
				HCM	LOS	HCM	LOS
6.	Collingwood St/Project Driveway No. 3 at Lincoln Avenue	AM PM	Two–Way Stop	27.8 s/v 14.6 s/v	D B	31.3 s/v 15.6 s/v	D C
C.	Project Driveway No. 4 at Lincoln Avenue	AM PM	One–Way Stop	16.4 s/v 11.6 s/v	C B	17.2 s/v 12.1 s/v	C B
Notes: s/v = seconds per vehicle							

School Drop-Off and Pick-Up Evaluation

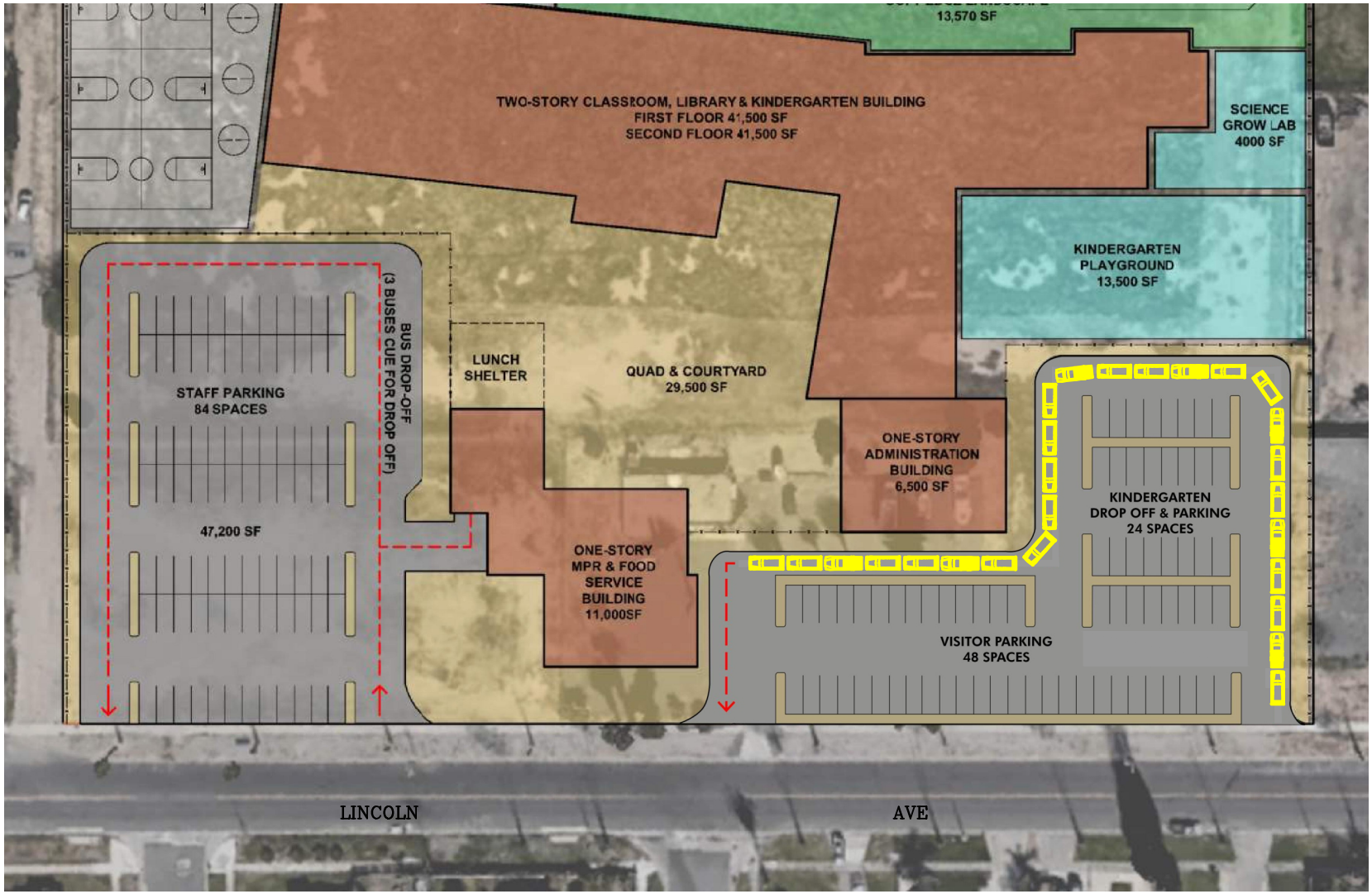
An evaluation of the school drop-off and pick-up area was conducted to ensure that vehicles will not queue back onto Lincoln Avenue. The following summarizes the results of LLG's evaluation.

Based on the Best Practice standards for on-site queuing related to school drop-off/pick-up activities, 6 percent of the effective student enrollment is a reasonable factor for estimating the "maximum queue" of vehicles on site. As stated previously, the proposed school will have a total of 800 students. Of this total, it is conservatively assumed that 15 percent of the total student enrollment (i.e., 120 students) would walk to/from school. Based on information provided by RUSD staff, 309 students within the academic service boundary will be eligible to be bussed to/from the site based on their distance of 1.25+ miles from the project site. This evaluation assumes 80 percent of the 309 eligible students (i.e., 248 students) would be bused to/from the site. With the aforementioned adjustments, a total of 432 effective students would utilize the drop-off/pick-up area [(800 students)–(120 students)–(248 students) = 432 students]. Application of the 6 percent factor to 432 students results in a "maximum queue" of 26 vehicles.

Exhibit 3.9-20 illustrates the school drop off/pick-up area queuing analysis. Review of Exhibit 3.9-20 shows that the project can accommodate a maximum queue of 26 vehicles on-site and therefore it is not anticipated that vehicles will queue back onto Lincoln Avenue. As such, the drop-off/pick-up area is adequate.

Recommended Safe Route to School Evaluation

Exhibit 3.9-21 presents the recommended safe route to school paths of travel for students walking and/or biking to/from the school. Review of Exhibit 3.9-21 indicates that it is recommended that pedestrians northwest/west/southwest of the school site make their way to Madison Street and travel along Madison Street to its intersection with Lincoln Avenue. It is then recommended that these students cross the street within the crosswalks at the intersection of Madison Street/Lincoln Avenue during the traffic signals walk-phase.



KEY

= MAXIMUM ANTICIPATED QUEUE (26 VEHICLES)

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-20
Drop-Off/Pick-Up Area Queuing Analysis

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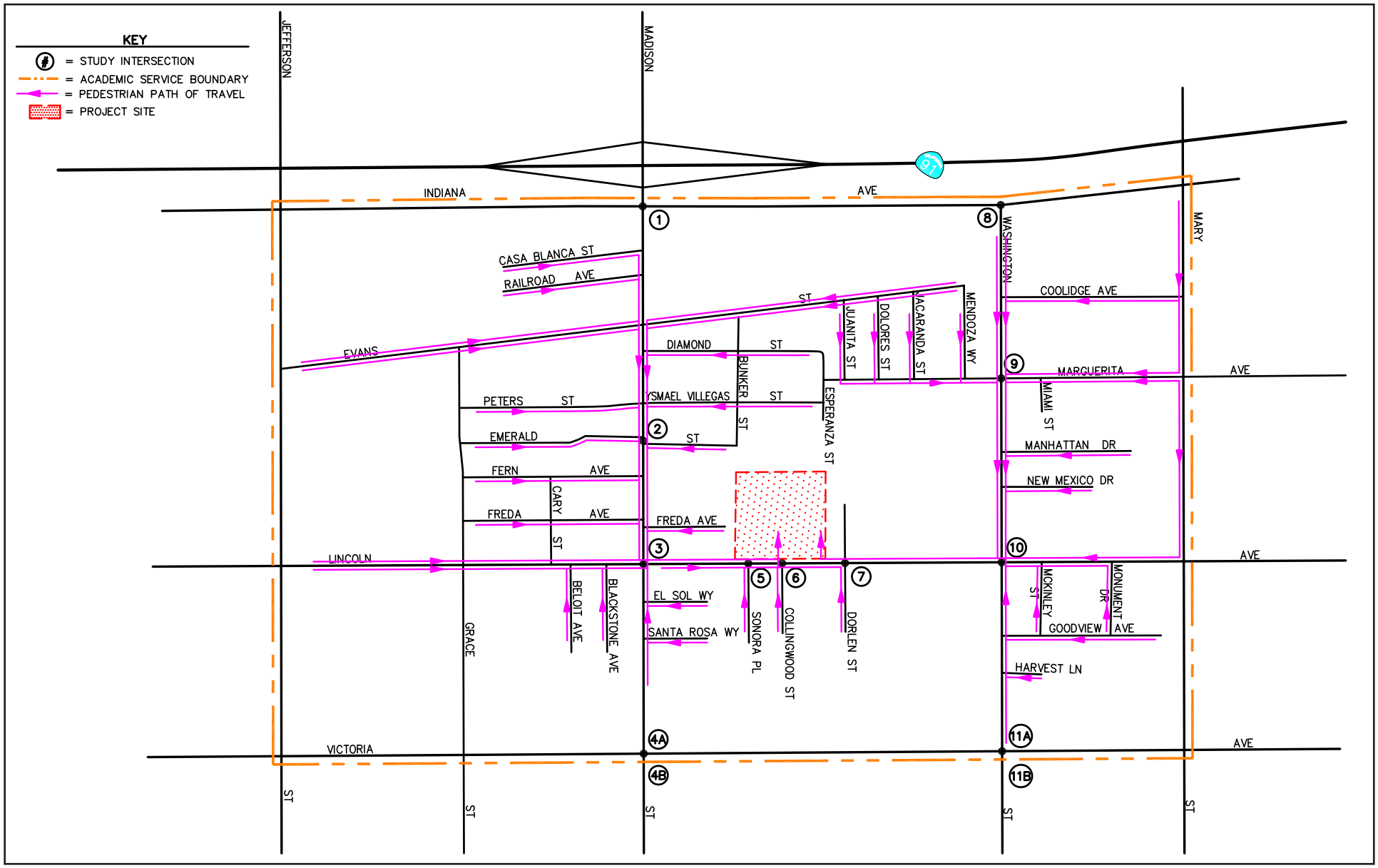

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-21
Recommended Safe Route to School Pedestrian Paths of Travel

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Further review of Exhibit 3.9-21 indicates that it is recommended that students northeast/east/southeast of the school site make their way to Washington Street and travel along Washington Street to its intersection with Lincoln Avenue. It is then recommended that these students cross the street within the crosswalks at the intersection of Washington Street/Lincoln Avenue.

Lastly, as shown in Exhibit 3.9-21, in order for students to access the site from neighborhoods along Sonora Place, Collingwood Street, and Dorlen Street, a pedestrian school crossing signal will be required to be installed on the west leg of the intersection of Lincoln Avenue/Collingwood Street-Project Driveway No. 3 for students to safely cross Lincoln Avenue.

Based on review of the site plan, it is recommended that sidewalk improvements be provided along the easterly boundary of the parking lot to provide safe student access to the school from the east via the north side of Lincoln Avenue.

Recommended School Signs and Pavement Markings

Exhibit 3.9-22 presents the recommended school signs and pavement markings required of the project based on the safe route to school pedestrian paths of travel presented previously in Exhibit 3.9-21. Review of Exhibit 3.9-22 shows that it is recommended that the crosswalks at the intersections of Madison Street/Lincoln Avenue and Washington Street/Lincoln Avenue be painted yellow to indicate school crossings. It is also recommended that SR4-1(CA) signs (i.e., school, 25 mph speed limit when children are present) and SW24-3(CA) signs (i.e., school crossing ahead) be installed in the general vicinity of the yellow asterisks shown in Exhibit 3.9-22. Lastly, as shown in Exhibit 3.9-22, it is recommended that a flashing pedestrian school crossing signal be installed on the west leg of the intersection of Lincoln Avenue/Collingwood Street-Project Driveway No. 3. It is also recommended that this flashing pedestrian school crossing signal be staffed by a crossing guard during the school arrival period and school departure period to further ensure that pedestrians can safely cross Lincoln Avenue. It should be noted that all of the aforementioned improvements are subject to the approval of the City of Riverside.

Recommended Improvements

For those intersections where projected project traffic volumes are expected to result in unacceptable operating conditions (as defined by a City's significance criteria), traffic impact studies of this type typically recommend (identify) improvement measures that change the intersection geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure (add lanes) to specific approaches of a key intersection. The identified improvements are expected to:

- Mitigate the impact of existing traffic, project traffic and future non-project (ambient traffic growth and cumulative project) traffic, and
- Improve Levels of Service to an acceptable range and/or to pre-project conditions.

Existing Plus Project Traffic Conditions

The results of the intersection capacity analysis presented previously in Table 3.9-7 shows that the project will significantly impact two of the 11 key study intersections under the "Existing Plus Project" traffic scenario. The following are improvements recommended to mitigate the Existing Plus Project traffic impacts:

- **No. 9—Washington Street at Marguerita Avenue:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered ***significant and unavoidable*** and a statement of overriding considerations will be required for this location.
- **No. 10—Washington Street at Lincoln Avenue:** Install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Exhibit 3.9-23 graphically illustrates the Existing Plus Project recommended improvements.

Existing Plus Ambient Growth (Year 2022) Plus Project Traffic Conditions

The results of the "Existing Plus Ambient Growth (Year 2022) Plus Project" intersection capacity analysis presented previously in Table 3.9-9 (columns 2–4) indicates that the project will significantly impact two of the 11 key study intersections. The following are improvements recommended to mitigate the Existing Plus Ambient Growth (Year 2022) Plus Project traffic impacts.

- **No. 9—Washington Street at Marguerita Avenue:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered ***significant and unavoidable*** and a statement of overriding considerations will be required for this location.
- **No. 10—Washington Street at Lincoln Avenue:** Install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Exhibit 3.9-24 graphically illustrates the existing plus ambient growth (Year 2022) plus project recommended improvements.

Year 2022 Cumulative Plus Project Traffic Conditions

The results of the "Year 2022 Cumulative Plus Project" intersection capacity analysis presented previously Table 3.9-9 (columns 5–7) indicates that the project will significantly impact two of the 11 key study intersections. The following are improvements recommended to mitigate the Year 2022 Cumulative Plus Project traffic impacts.

- **No. 9—Washington Street at Marguerita Avenue:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered ***significant and unavoidable*** and a statement of overriding considerations will be required for this location.

- **No. 10—Washington Street at Lincoln Avenue:** Install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Exhibit 3.9-25 graphically illustrates the Year 2022 Cumulative Plus Project recommended improvements.

Year 2040 Buildout Plus Project Traffic Conditions

The results of the "Year 2040 Buildout Plus Project" intersection capacity analysis presented previously in Table 3.9-14 indicates that the project will significantly impact two of the 11 key study intersections. The following are improvements recommended to mitigate the Year 2040 Buildout Plus Project traffic impacts.

- **No. 9—Washington Street at Marguerita Avenue:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered ***significant and unavoidable*** and a statement of overriding considerations will be required for this location.
- **No. 10—Washington Street at Lincoln Avenue:** Install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Exhibit 3.9-26 graphically illustrates the Year 2040 buildout plus project recommended improvements.

Project Fair Share Analysis

The transportation impacts associated with development of the project were determined based on the LOS analyses presented previously in Table 3.9-7, Table 3.9-9, and Table 3.9-14. As summarized previously, the project is anticipated to create two significant impacts in the near-term (Year 2022) traffic condition and two significant impacts in the Year 2040 buildout traffic condition. As such, the project can be expected to pay a proportional "fair-share" of the improvement costs of the impacted intersections.

Year 2022 Project-Related Fair Share Contribution

Table 3.9-16 presents the peak-hour percentage of net traffic impact at the study intersections impacted by the project for Year 2022 traffic conditions (i.e., cumulative analysis). As presented in this table, the first column (1) presents a total of all intersection peak-hour movements for existing traffic conditions. The second column (2) presents project only traffic conditions. The third column (3) presents future Year 2022 traffic conditions with project traffic. The fourth column (4) represents what percentage of total intersection peak-hour traffic is project-related traffic.

Review of Table 3.9-16 shows that the project's traffic percentage at the impacted key study intersection of Washington Street/Lincoln Avenue under Year 2022 traffic conditions totals 64.2 percent.

It should be noted that a fair-share percentage has not been identified for the remaining impacted key study intersection of Washington Street/Marguerita Avenue, since no physical mitigation measures are feasible at this location.

Table 3.9-16: Year 2022 Project Fair Share Percentage Contribution

Key Intersection		Impacted Time Period	(1) Existing Traffic	(2) Project Only Traffic	(3) Year 2022 Plus Project Traffic	(4) Project Percentage Share
10.	Washington Street at Lincoln Avenue	AM	1,333	219	1,674	**64.2%**
Notes: Net Project Percent Increase (4) = [Column (2)]/[Column (3)—Column (1)]						

Year 2040 Buildout Project-Related Fair Share Contribution

Table 3.9-17 presents the peak-hour percentage of net traffic impact at the study intersections impacted by the project for Year 2040 buildout traffic conditions. As presented in this table, the first column (1) presents a total of all intersection peak-hour movements for existing traffic conditions. The second column (2) presents project only traffic conditions. The third column (3) presents future Year 2040 buildout traffic conditions with project traffic. The fourth column (4) represents what percentage of total intersection peak-hour traffic is project-related traffic.

Review of Table 3.9-17 shows that the project's traffic percentage at the impacted key study intersection of Washington Street/Lincoln Avenue under Year 2040 buildout traffic conditions totals 35.2 percent[2]. It should be noted that a fair-share percentage has not been identified for the remaining impacted key study intersection of Washington Street/Marguerita Avenue, since no physical mitigation measures are feasible at this location.

Table 3.9-17: Year 2040 Buildout Project Fair Share Percentage Contribution

Key Intersection		Impacted Time Period	(1) Existing Traffic	(2) Project Only Traffic	(3) Year 2040 Buildout Plus Project Traffic	(4) Project Percentage Share
10.	Washington Street at Lincoln Avenue	AM PM	1,333 1,127	219 56	1,956 1,556	**35.2%** 13.1%
Notes: Net Project Percent Increase (4) = [Column (2)]/[Column (3)—Column (1)]						

[2] However, given that the project consists of no new actual project traffic based on the current student generation within the academic service boundary, (i.e. 836 students ≥ 800 proposed students) and the fact that the impact is cumulative at this location, the fair share contribution could be considered zero.

SOURCE: GOOGLE

KEY

- = YELLOW CROSSWALKS
- = FLASHING PEDESTRIAN SCHOOL CROSSING SIGNAL
- = SCHOOL ZONE SIGNAGE (SEE DETAIL)
- SSX = SLOW SCHOOL XING

SIGN DETAILS

SR4-1(CA)

SW24-3(CA)

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-22
Recommended School Signs and Pavement Markings

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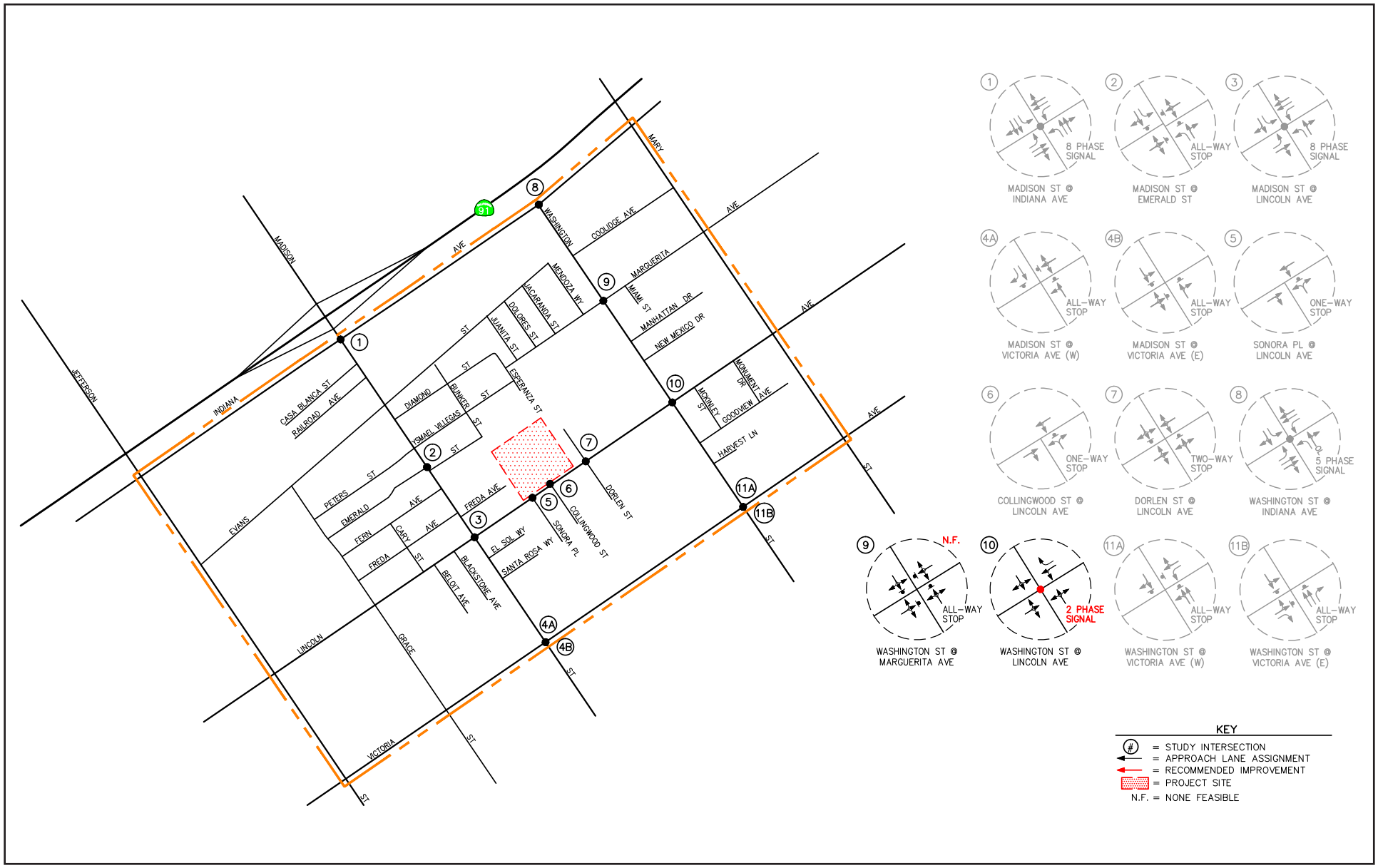

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-23
Existing Plus Project Recommended Improvements

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RIVERSIDE UNIFIED SCHOOL DISTRICT
CASA BLANCA ELEMENTARY SCHOOL PROJECT
FOCUSED ENVIRONMENTAL IMPACT REPORT

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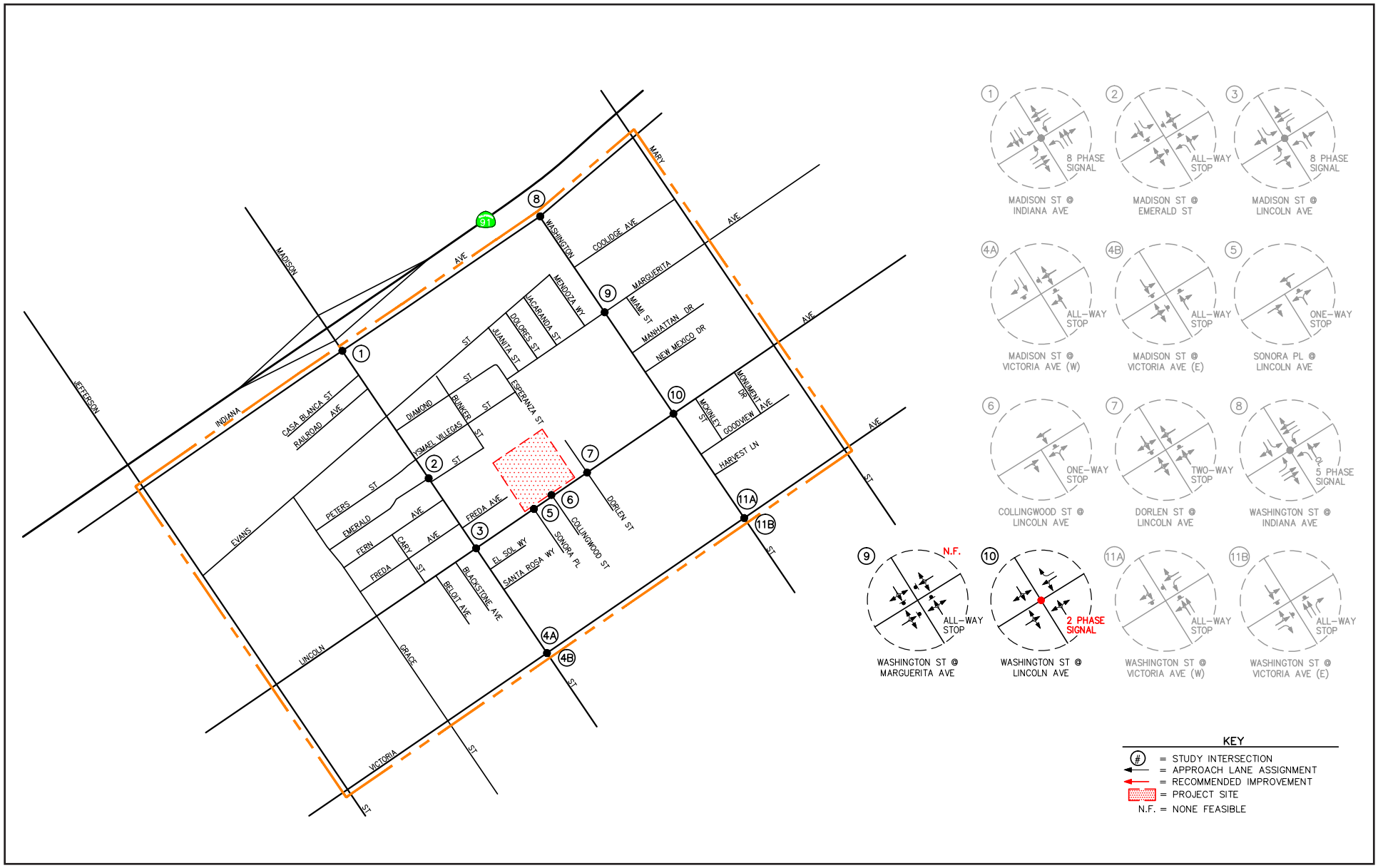

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-24
Existing Plus Ambient Growth (Year 2022) Plus Project Recommended Improvements

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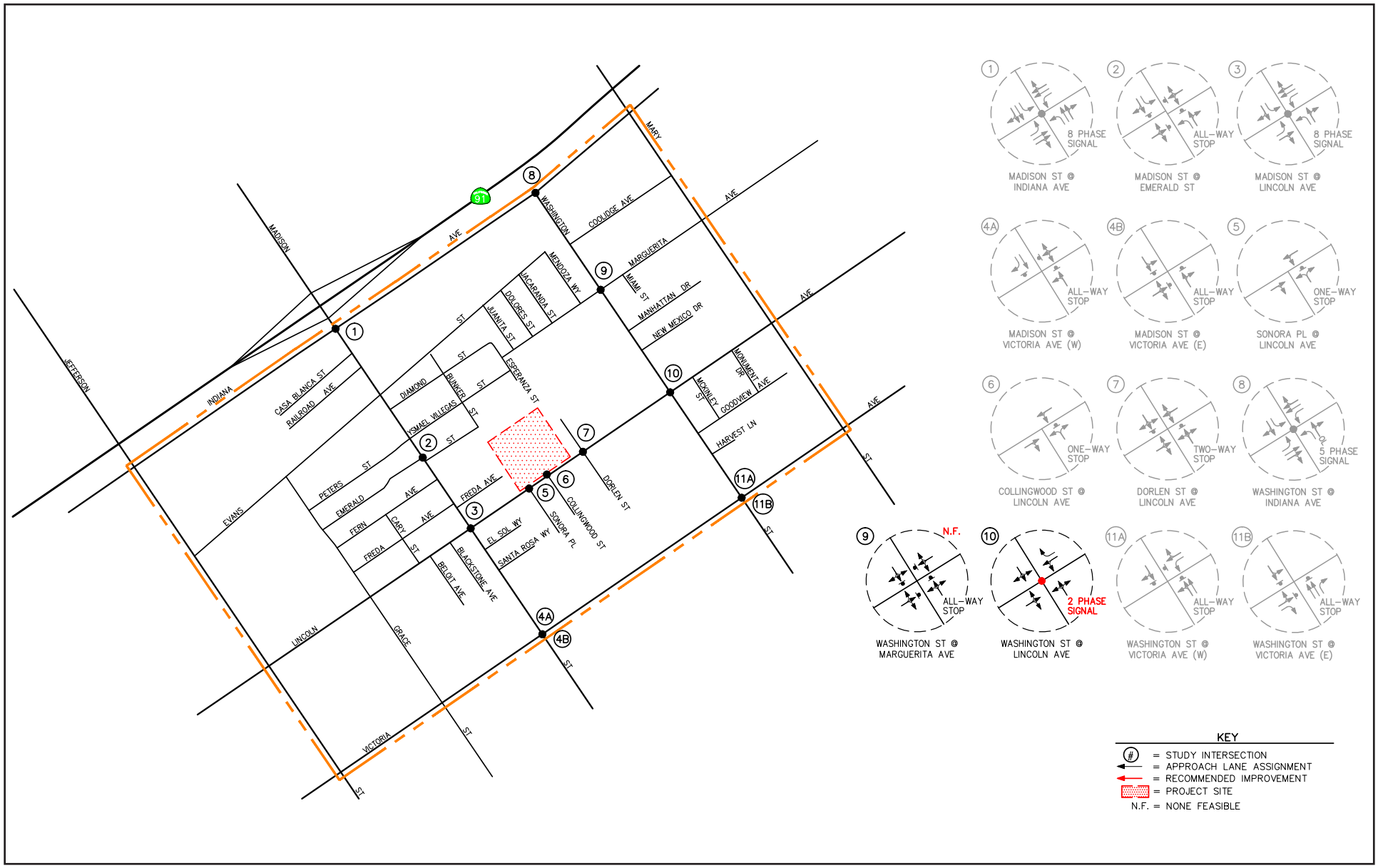

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-25
Year 2022 Cumulative Plus Project Recommended Improvements

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RIVERSIDE UNIFIED SCHOOL DISTRICT
CASA BLANCA ELEMENTARY SCHOOL PROJECT
FOCUSED ENVIRONMENTAL IMPACT REPORT

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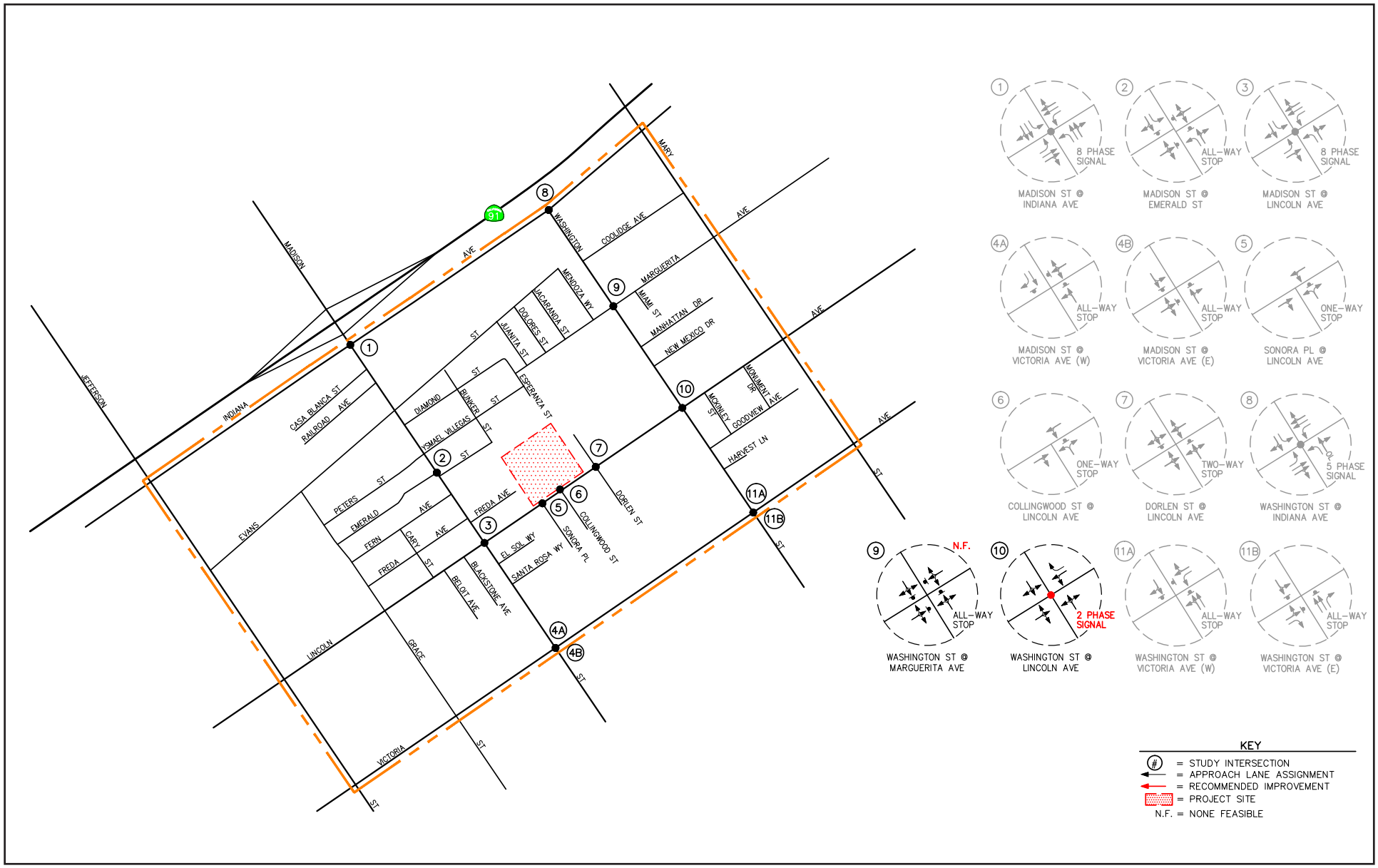

Source: Linscott Law & Greenspan Engineers, November 2018.

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Exhibit 3.9-26
Year 2040 Buildout Plus Project Recommended Improvements

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Recommended Existing Plus Project Improvements—The results of the intersection capacity analysis presented previously in Table 3.9-7 shows that the project will significantly impact two of the 11 key study intersections under the "Existing Plus Project" traffic scenario. The following are improvements recommended to mitigate the Existing Plus Project traffic impacts:

- **No. 9—Washington Street at Marguerita Avenue:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered ***significant and unavoidable*** and a statement of overriding considerations will be required for this location.
- **No. 10—Washington Street at Lincoln Avenue:** Install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Recommended Existing Plus Ambient Growth (Year 2022) Plus Project Improvements—The results of the "Existing Plus Ambient Growth (Year 2022) Plus Project" intersection capacity analysis presented previously in Table 3.9-9 (columns 2–4) indicates that the project will significantly impact two of the 11 key study intersections. The following are improvements recommended to mitigate the Existing Plus Ambient Growth (Year 2022) Plus Project traffic impacts.

- **No. 9—Washington Street at Marguerita Avenue:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered ***significant and unavoidable*** and a statement of overriding considerations will be required for this location.
- **No. 10—Washington Street at Lincoln Avenue:** Install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Recommended Year 2022 Cumulative Plus Project Improvements—The results of the "Year 2022 Cumulative Plus Project" intersection capacity analysis presented previously in Table 3.9-9 (columns 5–7) indicates that the project will significantly impact two of the 11 key study intersections. The following are improvements recommended to mitigate the Year 2022 Cumulative Plus Project traffic impacts.

- **No. 9—Washington Street at Marguerita Avenue:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered ***significant and unavoidable*** and a statement of overriding considerations will be required for this location.
- **No. 10—Washington Street at Lincoln Avenue:** Install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Recommended Year 2040 Buildout Plus Project Improvements—The results of the "Year 2040 Buildout Plus Project" intersection capacity analysis presented previously in Table 3.9-9 indicates that the project will significantly impact two of the 11 key study intersections. The following are improvements recommended to mitigate the Year 2040 Buildout Plus Project traffic impacts.

- **No. 9—Washington Street at Marguerita Avenue:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered ***significant and unavoidable*** and a statement of overriding considerations will be required for this location.
- **No. 10—Washington Street at Lincoln Avenue:** Install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Year 2022 (Cumulative Analysis) Project-Related Fair Share Contribution—The project's traffic percentage at the impacted key study intersection of Washington Street/Lincoln Avenue under Year 2022 traffic conditions totals 64.2 percent. However, given that the project consists of no new actual project traffic based on the current student generation within the academic service boundary (i.e. 836 students ≥ 800 proposed students) and the fact that the impact is cumulative at this location, the fair share contribution could be considered zero. It should be noted that a fair-share percentage has not been identified for the remaining impacted key study intersection of Washington Street/Marguerita Avenue, since no physical mitigation measures are feasible at this location.

Year 2040 Buildout Project-Related Fair Share Contribution—The project's traffic percentage at the impacted key study intersection of Washington Street/Lincoln Avenue under Year 2040 buildout traffic conditions totals 35.2 percent. However, given that the project consists of no new actual project traffic based on the current student generation within the academic service boundary (i.e. 800 students ≥ 800 proposed students) and the fact that the impact is cumulative at this location, the fair share contribution could be considered zero. It should be noted that a fair-share percentage has not been identified for the remaining impacted key study intersection of Washington Street/Marguerita Avenue, since no physical mitigation measures are feasible at this location.

3.9.3 - Regulatory Framework

State Regulations

The State Department of Transportation (Caltrans) performance standards for all State highway facilities are the transition between LOS C and D. If a State highway facility operates below the transition between LOS C and D, the Caltrans threshold is to maintain the lower level of service. Thus, LOS D is considered to be the limit of acceptable traffic operations during the peak-hour at freeway ramp intersections, basic freeway segments and merge/diverge ramp junctions maintained by Caltrans.

Senate Bill 743: Vehicle Miles Traveled Analysis

Senate Bill 743 (SB 743) requires the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code [PRC] § 21099(b)(1)). Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." Once the CEQA Guidelines are amended to include those alternative criteria, auto delay will no longer be considered a significant impact under CEQA.

Draft Guidelines and a Technical Advisory for complying with the new requirements under SB 743 are underway and have undergone several rounds of public comment. OPR issued a "Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA" on January 20, 2016. This proposal states that analysis of vehicle miles traveled will be voluntary for 2 years following adoption of the new Guidelines. During that time, OPR will monitor implementation and may evaluate whether any updates to the Guidelines or Technical Advisory are needed.

Because guidance for complying with SB 743 has not yet been finalized and a vehicle miles traveled analysis is not required under CEQA until January 1, 2020, the project's transportation analysis utilizes the current CEQA Guidelines Appendix G thresholds and the County of Riverside CEQA thresholds to analyze the significance of the project's traffic impacts.

Cumulative Impacts

Cumulative traffic impacts are created as a result of a combination of the project, together with other future developments, which contribute to the overall traffic impacts, and may require additional improvements to maintain acceptable LOS with or without the project. A project's contribution to a cumulatively considerable impact can be reduced to "less-than-significant" if the project is required to implement or fund its fair share of improvements designed to alleviate the potential cumulative impact. If full funding of future cumulative improvements is not reasonably assured or is outside the control of the lead agency, a temporary unmitigated cumulative impact may occur until the needed improvement is fully funded and constructed.

In the event that an intersection is operating at, or is forecast to operate at a deficient LOS, the County's Congestion Management Program (CMP) guidelines have defined a series of steps to be completed to determine a project's contribution to the deficiency of intersections. The steps are as follows:

1. Determine the mitigation measures necessary to achieve an acceptable service level.
2. Calculate the project's share of future peak-hour traffic volume projections.
3. Estimate the cost to implement recommended mitigation measures.
4. Calculate the project's fair-share contribution to mitigate the project's traffic impacts.

3.9.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether transportation and traffic impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

3.9.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

Traffic Increase

Impact TRANS-1:	**The project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.**

Impact Analysis

Traffic analysis was performed for the following scenarios:

a) Existing Traffic Conditions, as described in Section 3.8-2, Existing Conditions;
b) Existing Plus Project Traffic Conditions;
c) Scenario (B) with Improvements, if necessary;
d) Existing Plus A.G. (Ambient Growth) to the Year 2022 Traffic Conditions;
e) Existing Plus A.G. to the Year 2022 Plus Project Traffic Conditions;
f) Scenario (E) with Improvements, if necessary;
g) Existing Plus A.G. Plus Project Plus Cumulative Traffic Conditions;
h) Scenario (G) with Improvements, if necessary;
i) Year 2040 Buildout Traffic Conditions;
j) Year 2040 Buildout Plus Project Traffic Conditions; and
k) Scenario (J) with Improvements, if necessary.

Existing Plus Project Traffic Conditions

Traffic associated with the project impacts two of the 11 intersections when compared to the LOS standards and significance criteria specified in this Draft Focused EIR. The remaining nine key

intersections are forecast to continue to operate an acceptable LOS with the addition of project generated traffic to existing traffic. The two locations projected to operate at unacceptable LOS with the addition of project traffic are shown in Table 3.9-8.

Intersection Operation Analysis

Washington Street at Lincoln Avenue currently operates at unacceptable LOS E during the AM peak-hour. With implementation of project traffic, this intersection, in addition to the intersection of Washington Street at Marguerita Avenue will operate

With implementation of improvements at the intersection of Washington and Lincoln, it is forecast to operate at an acceptable LOS during the AM and PM peak-hours. However, for the intersection of Washington Street/Marguerita Avenue, additional capacity-enhancing improvements at this key study intersection do not appear to be feasible due to physical and right-of-way restrictions that prohibit any additional widening and or/restriping. Therefore, impacts at this location will remain significant and unavoidable.

Existing Plus Ambient (Year 2022) Traffic Conditions

This section discusses the methods used to develop Existing Plus Ambient (Year 2022) traffic conditions and the Existing Plus Ambient Growth (2022) Plus Project Traffic conditions.

Table 3.9-9 summarizes the peak-hour LOS results at the 11 key intersections for “Year 2022” traffic conditions. As shown in the Table 3.9-8, the addition of ambient growth traffic will adversely impact the intersection of Washington Street/Lincoln Avenue. This intersection is forecast to operate at unacceptable LOS F during the AM peak-hour with the addition of ambient growth traffic. The remaining 10 intersections are expected to continue to operate at an acceptable service level during the AM and PM peak-hours with the addition of ambient growth traffic to existing traffic.

Existing Plus Ambient Growth to the Year 2022 Plus Project Traffic Conditions

Table 3.9-9 also indicates that traffic associated with the project will significantly impact two of the 11 key study intersections, when compared to the LOS standards and significance criteria specified in this Draft Focused EIR. The remaining nine intersections are expected to continue to operate at an acceptable service level during the AM and PM peak-hours with the addition of ambient growth and project generated traffic in the Year 2022. The two locations projected to operate at an unacceptable LOS are shown in Table 3.9-10.The implementation of improvements at the impacted key study intersection of Washington Street/Lincoln Avenue completely offset the impact of project traffic, and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak-hours. For the remaining impacted key study intersection of Washington Street/Marguerita Avenue, additional capacity-enhancing improvements at this key study intersection do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. **Therefore, the impact at this location will remain significant and unavoidable.**

Year 2040 Buildout Traffic Conditions

Table 3.9-14 summarizes peak level of service results at the 11 key study intersections for “Year 2040 Buildout Plus project” traffic conditions. Table 3.9-14 shows that projected Year 2040 buildout

without project traffic will adversely impact two of the 11 key study intersections. The remaining nine intersections are forecast to operate at an unacceptable LOS for Year 2040 buildout without project traffic conditions. The two locations projected to operate at an unacceptable LOS are Washington Street at Marguerita Avenue and Washington Street at Lincoln Avenue.

Year 2040 Buildout Plus Project Traffic Conditions

Traffic associated with the project will significantly impact two of the 11 key study intersections, when compared to the LOS standards and significance criteria specified in this Draft Focused EIR. The remaining nine key intersections are expected to continue to operate at an acceptable LOS with the addition of project generated traffic in the Year 2040. The two locations projected to operate at an unacceptable LOS are Washington Street at Marguerita Avenue and Washington Street at Lincoln Avenue.

As shown in Table 3.9-14, the implementation of improvements at the impacted key study intersection of Washington Street/Lincoln Avenue offsets the impacts of project traffic and the key study intersection is expected to operate at an acceptable LOS during the AM and PM peak-hours. For the remaining impacted key study intersection of Washington Street/Marguerita Avenue, additional capacity-enhancing improvements at this key study intersection are not feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. **Therefore, the impact at this location will remain significant and unavoidable.**

Existing Plus Project Traffic Conditions

The results of the intersection capacity analysis presented previously in Table 3.9-7 shows that the project will significantly impact two of the 11 key intersections under the "Existing Plus Project" traffic scenario. The following improvements are recommended to mitigate the Existing Plus Project traffic impacts:

- **No 9—Washington Street at Marguerita Avenue:** no physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered significant and unavoidable and a statement of overriding considerations will be required for this location.
- **No 10—Washington Street at Lincoln Avenue:** install a two-phase traffic signal. The installation of this improvement is subject to the approval of the City of Riverside.

Existing Plus Ambient Growth (Year 2022) Plus Project Traffic Conditions

The results of the "Existing Plus Ambient Growth (Year 2022) Plus Project" intersection capacity analysis presented previously in Table 3.9-9 (Columns 2-4) indicates that the project will significant impact two of the 11 key study intersections. The following are improvements recommended to mitigate the Existing Plus Project Ambient Growth (Year 2022) Plus Project traffic impacts:

- **No 9—Washington Street at Marguerita Avenue:** no physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered significant and unavoidable and a statement of overriding considerations will be required for this location.

- **No 10—Washington Street at Lincoln Avenue:** install a two-phase traffic signal. The installation of this implement is subject to the approval of the City of Riverside.

Year 2040 Buildout Plus Project Traffic Conditions

The results of the "Year 2040 Buildout Plus Project" intersection capacity analysis presented previously in Table 3.9-14 indicates that the project will significantly impact two of the 11 key study intersections with the project, Washington Street at Marguerita Avenue will operate at an unacceptable LOS; however, there are no physical mitigation measures available to reduce this impact because any additional turn lanes will require widening and additional right-of-way, which is not feasible at this location. Thus, even with implementation of available feasible mitigation measures, the impact at this location is considered significant and unavoidable and a statement of overriding considerations will be required for this location.

Impacts at Washington Street at Lincoln Avenue can be mitigated in part with the installation of a two-phase traffic signal because the traffic signal will potentially improve the flow of traffic more effectively than the four-way stop that is currently implemented at this location. The installation of this improvement is subject to the approval of the City of Riverside. However, even with installation of this improvement impacts at this intersection will remain significant and unavoidable. Implementation of MM-TRANS-1a, the payment of a "fair share" of improvement costs would mitigate the significant and unavoidable impacts associated with the near-term (Year 2022) traffic condition and two significant impacts in the Year 2040 buildout traffic condition.

For pedestrians, a pedestrian school crossing signal on the west leg of the intersection of Lincoln Avenue and Collingwood Street Project Driveway No. 3 is required to allow pedestrians to safely cross Lincoln Avenue. Adding this pedestrian school crossing signal would reduce potential impacts by providing a safe and regulated walkway.

In addition to intersection improvements listed above, sidewalk improvements along the easterly boundary of the parking lot would reduce impacts by providing safe pedestrian access to the school from the east via the north side of Lincoln Avenue.

Level of Significance Before Mitigation

Potentially significant under all scenarios.

As discussed above, the following intersections are currently operating at unacceptable LOS under (all scenarios) existing 2018 conditions, Existing Plus Project conditions, ambient growth (year 2022) conditions, and Year 2040 buildout conditions:

1. Washington Street at Marguerita Avenue (AM and PM Peak-hours)
2. Washington Street at Lincoln Avenue (AM and PM Peak-hours)
    a. The intersection of Washington Street at Lincoln Avenue currently operates at an unacceptable LOS. However, with the implementation of a traffic signal, LOS at this location could be improved.

Mitigation Measure (MM) TRANS-1a and MM TRANS-1b are required to mitigate impacts to the Washington Street/Lincoln Avenue intersection.

Traffic impacts at Washington Street at Lincoln Avenue could be reduced to a less than significant level with the implementation of mitigation measures subject to the approval of the City of Riverside.

In addition, implementation of MM TRANS-1c, MM TRANS-1d, and MM TRANS-1e, will ensure that students walking and or biking to and from school will do so in a safe manner by minimizing potential hazards from vehicles in the project area. This is consistent with the General Plan Policy ED-4.8, which indicates the support of the Safe Routes to School programs of Alvord Unified School District and RUSD. Impacts to mass transit, bicycle, and pedestrian travel would be less than significant. Consequently, MM TRANS-1f ensures that vehicular travel is not impacted by the location of the driveway and the vehicles entering and exiting said driveway.

Mitigation Measures

MM TRANS-1a The project will pay a proportional "fair-share" of the improvement costs of the impacted intersections to mitigate the project's traffic impacts.

MM TRANS-1b RUSD shall pay a proportional "fair-share" contribution for the installation of a two-phase traffic signal at the Washington Street and Lincoln Avenue intersection. The installation of this improvement is subject to the approval of the City of Riverside.

MM TRANS-1c Appropriate school signs and pavement markings shall be installed by RUSD near the project area. Crosswalks at the intersections of Madison Street and Lincoln Avenue and Washington Street and Lincoln Avenue shall be painted yellow to indicate school crossings. SR4-1 signs and SW24-3 signs should be installed in the general vicinity of the yellow asterisks shown in Exhibit 3.9-22 of the TIA. Flashing pedestrian school crossing signals shall be installed on the west leg of the intersection of Lincoln Avenue/Collingwood street-Project Driveway No. 3. Flashing pedestrian school signal shall be staffed by a crossing guard during the school arrival period and departure period to further ensure that pedestrians can safely cross Lincoln Avenue.

MM TRANS-1d Pedestrians travelling northwest/west/southwest of the site should travel towards and along Madison Street to its intersection with Lincoln Avenue. Students then should cross the street within the crosswalks at the intersection of Madison Street/Lincoln Avenue during the traffic signals walk-phase. Consequently, pedestrians travelling northeast/east/southeast of the school should travel towards and along Washington Street to its intersection with Lincoln Avenue. Students should then cross the street within the crosswalks at the intersection of Washington Street/Lincoln Avenue.

MM TRANS-1e Sidewalk improvements are to be provided along the easterly boundary of the school parking lot to provide safe student access to the school from the east via t the north side of Lincoln Avenue.

MM TRANS-1f Project Drive No. 3 shall be directly aligned (i.e. centerline to centerline) with Collingswood Street to minimize conflicting vehicular movements during final detail design review.

Level of Significance After Mitigation

Significant and unavoidable impact.

Congestion Management Program

Impact TRANS-2: The project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Impact Analysis

Each county in California is required to develop a CMP that analyzes the links between land use, transportation, and air quality. The Riverside County Transportation Commission (RCTC) is the County of Riverside's Congestion Management Agency. The RCTC prepares and periodically updates the County's CMP to meet federal Congestion Management System guidelines and state CMP legislation (RCTC 2013). Transportation improvements associated with new growth are funded through the Western Riverside County Transportation Uniform Mitigation Fee, or Transportation Uniform Mitigation Fee (TUMF) Program.

According to the 2011 Riverside County CMP, Table 2-1, CMP System of Highways and Roadways, the roads adjacent to the project site are not listed as part of the CMP System of Highways and Roadways. The nearest road that is part of the CMP System of Highways and Roadways is SR-91, located approximately half a mile north of the project site. Therefore, the project would not conflict with the Riverside County CMP, and potential impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Emergency Access

Impact TRANS-5: The project would not result in inadequate emergency access.

Impact Analysis

The project will include improvements on streets adjacent to the project site and will include four access points to the project site. With development of the project, the driveways into the project site would provide an internal circulation system that includes coordinated, one-way passing and student drop-off lanes. This system would provide adequate emergency vehicle flow and access to the new school.

Construction of the project may cause temporary delays along Washington Street at Lincoln Avenue and Washington Street at Marguerita Avenue; however, the City requires a temporary road construction and traffic congestion management plan during construction to minimize delay. The plan will include measures such as MM TRANS-5, that will reduce traffic impacts by providing safe detours around the project site, appropriate signage, and a designated construction worker assigned to control traffic. With implementation of a traffic congestion management plan, the project is anticipated to have a less than significant impact regarding circulation during construction. In order to ensure that such plan properly addresses potential environmental impacts, MM TRAN-5 requires the preparation of a traffic control plan, which would reduce impacts to less than significant.

With implementation of established County and City requirements for traffic control on public roadways during construction, the project is expected to have a less than significant impact on emergency access during construction. Emergency access to serve the operational project site will be developed in accordance with applicable ordinances, standard conditions of approval, and permits related to emergency access. Preparation of a traffic congestion management plan as required by MM TRAN-5 will ensure that construction traffic and activities do not adversely affect safe and efficient traffic flow during construction.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-5 Prior to issuance of any grading permits, the developer shall provide a detailed construction traffic control plan to the City of Riverside for approval. A construction traffic control plan shall be prepared for all aspects of project construction, including physical improvements on the site itself, as well as any off-site traffic improvements required to be completed directly by the project applicant. The construction traffic control plan shall describe in detail the location of equipment staging areas, stockpiling/storage areas, construction worker and equipment parking areas, roadways that would be potentially affected, safe detours around the project and/or roadway construction site, as well as provide temporary traffic control (e.g., flag person) and appropriate signage during construction-related truck hauling activities. The traffic control plan shall ensure adequate and uninterrupted access to all nearby

residences throughout the construction period. The purpose of these measures is to safely guide motorists, cyclists, and pedestrians, minimize traffic impacts, and ensure the safe and even flow of traffic during construction, consistent with County standards and requirements.

Level of Significance After Mitigation

Less than significant impact.

Conflict with Alternative Transportation

Impact TRANS-6: The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact Analysis

The City General Plan includes policies to prioritize and maintain bike lanes, bike parking, pedestrian crossings, and other non-automobile infrastructure. Due to its size, character and proposed elements, the project would not conflict with those policies or impact existing facilities.

Development of the project will comply with the development standards for the County of Riverside. These standards require that sidewalks, and all access will be in compliance with Americans with Disabilities Act (ADA) standards for accessibility. Therefore, potential impacts would be less than significant.

The project does not conflict with the City of Riverside Bicycle Program and Bicycle Master Plan, adopted May 22, 2007. According to the City of Riverside General Plan and the Bicycle Master Plan, there is one Class 2 bikeway along Lincoln Avenue. The project would not conflict or impose any new constraints on any surrounding bicycle facilities or on nearby bikeway on Lincoln Avenue, as bike lanes would not be closed during construction. In addition, the project includes dedicated bike/walk entryways for both students and staff.

Outlined in the Bicycle Master Plan Circulation and Community Mobility Element of the General Plan, Policy CCM-1.2 states that bicycle and pedestrian trails and bicycle racks shall be incorporated into all future development projects. In addition, the Bicycle Master Plan refers to Education Element Policies ED-4.3 and ED-4.6, which state that the City is to work with school districts to incorporate bicycle access, racks and bike lanes into the school design, and work towards providing a bicycle network within Riverside that connects schools, employment centers, and residential areas. Therefore, implementation of the project would be consistent with such policies as required by the City of Riverside.

The Riverside Transit Agency (RTA) provided by the City of Riverside includes Routes 1, 10, 14, and 149, near the general vicinity of the project site. The project site is well-served by two existing RTA bus stops at either end of the project site. Because the project will serve the already existing population and students residing more than 1.25 miles from the project site will be eligible for RUSD

busing, it is not anticipated that the project will result in increased ridership on RTA buses. Therefore, the project would not decrease the performance or safety of RTA bus service.

Additionally, as described above, the design of the project includes curbs and sidewalks where required, thereby encouraging and safeguarding pedestrian activity. Therefore, the project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of those facilities. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

SECTION 4: CUMULATIVE EFFECTS

4.1 - Introduction

California Environmental Quality Act (CEQA) Guidelines Section 15130 requires the consideration of cumulative impacts within an Environmental Impact Report (EIR) when a project's incremental effects are cumulatively considerable. Cumulatively considerable means that ". . . the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those which are outside of the control of the lead agency.

In accordance with CEQA Guidelines Section 15130(b), ". . . the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone." The discussion should be guided by standards of practicality and reasonableness, and it should focus on the cumulative impact to which the identified other projects contribute rather than on the attributes of other projects that do not contribute to the cumulative impact.

As part of the Traffic Impact Analysis (Appendix H) prepared for the project, a cumulative project list was developed through consultation with staff from the City of Riverside. Table 4-1 summarizes the projects in the project vicinity that have the potential to create cumulatively considerable effects in conjunction with the proposed project.

Table 4-1: Cumulative Projects

No.	Address	Land Use	Quantity 1, 2
1	North of Dominion Avenue, between McMahon Street and Division Avenue	Senior Apartment Complex	117 DU
2	3399 Adams Street	Gas Station Convenience Store Car Wash	3,040 SF 4,159 SF 2,080 SF
3	3457 Arlington Avenue	Retail Restaurant	7,686 SF 7210 SF
4	3530 Madison Street	24 Hour Fitness Starbucks with Drive-Thru Commercial	37,849 SF 1,950 SF 41,117
5	5573 Arlington Avenue	Fast-Food Restaurant with Drive-Thru	2,200 SF
6	3640 Central Avenue	Chick-fil-A with Drive-thru	4,721 SF
7	7820 Lincoln Avenue	SF General Light Industrial	100,974 SF

Table 4-1 (cont.): Cumulative Projects

No.	Address	Land Use	Quantity 1, 2
8	6264 Nogales Street	Office Medical Office	7,030 SF 4,140 SF
9	Madison Street at Railroad Avenue	Commercial Warehouse	18,900 SF
10	8043 Indiana Avenue	SF Automobile Sales (New)	12,430 SF
11	6289 Palm Avenue	Self-storage facility	99,172 SF
12	3763 Tibbetts Street	Medical Office Building	2,500 SF
13	7979 Auto Drive	SF Walter Sprinter Dealership	40,374 SF
14	3575-3661 Merrill Avenue	Apartments Commercial	108 DU 1,200 SF
15	3510-3522, 3536 Adams Street	Athletic Performance Center SF Recreation Center Parking structure	12,500 SF[2] 11,200 SF[3] 1,456-spaces[4]
16	7434 Diamond Street	NA	7,078 SF Church
17	3490 Madison Street	Grocery Store Commercial	17,889 SF 8,065 SF
18	8230 Magnolia Avenue	Student Housing	116 Bed
19	8432 Magnolia Avenue	Student Housing	1,198 Bed
20	Northwest corner of Central Avenue and Victoria Avenue	Baseball/softball fields Redevelopment of existing softball field	Approx. 10 acres 2.25 acres

Notes:
[1] SF=Square Feet DU=Dwelling Unit
[2] Source: City of Riverside Community and Economic Development Department (LLG 2018).
[3] The athletic performance center and recreation center are considered to be ancillary uses of Cal Baptist University and thus will not generate new traffic onto the roadway network.
[4] The forecasted trip generation potential of the parking structure is based on the anticipated student growth from Fall 2018 to Fall 2022, approximated to be an increase of 4,233 students.
Source: Traffic Impact Analysis, Linscott, Law & Greenspan, Engineers (LLG 2018)

4.2 - Cumulative Impact Analysis

The cumulative impact analysis below is guided by the requirements of CEQA Guidelines Section 15130. Key principles established by this section include:

- A cumulative impact consists of an impact, which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.

- When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, an EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR.
- An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant if the project is required to implement or fund its fair-share of a mitigation measure or measures designed to alleviate the cumulative impact.

The cumulative impact analysis that follows relies on the principles above as the basis for determining the significance of the project's cumulative contribution to various impacts.

4.2.1 - Air Quality

The geographic scope of the cumulative air quality analysis is the South Coast Air Basin. Air quality is impacted by topography, dominant air flows, atmospheric inversions, location, and season; therefore using the Air Basin represents the area most likely to be impacted by the project's air emissions. By nature, air pollution is a largely cumulative impact resulting from emissions generated over a large geographic region. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

As shown in Table 3.1-12, the project's construction emissions would not exceed South Coast Air Quality Management District (SCAQMD) regional thresholds of significance. Furthermore as described in Section 3.1.5, Methodology, and Table 3.1-5, all construction activities would comply with applicable SCAQMD rules and regulations, including Rule 403 to minimize fugitive particulate Matter (PM) dust emissions. Considering that the project's short-term construction emissions would not exceed any significance thresholds, the project would not result in a cumulatively considerable net increase of construction emissions. Cumulative impacts from construction of the project would be less than significant.

As also shown in Table 3.1-13, the project's maximum daily operational emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the project's operational emissions would not result in a cumulatively considerable incremental contribution to the existing cumulative air quality impacts. Considering that the project's long-term operational emissions would not exceed any significance thresholds, the project would not result in a cumulatively considerable increase of operational emissions. The cumulative impact from long-term operation of the project would be less than significant. Therefore, the project in conjunction with other projects would not result in cumulative impacts to air quality.

4.2.2 - Biological Resources

The geographic scope of the biological resources analysis is the Riverside area. Biological impacts tend to be localized; therefore, the area near the project area would be most affected by project activities (generally within a 0.5 mile radius). The site is located within the Western Riverside County

Multiple Species Habitat Conservation Plan (MSHCP). The purpose of the MSHCP is to prescribe mitigation to protect species within the MSHCP area so that development can still occur, within established parameters, as long as MMs identified in the MSCHP are applied. Like all projects located within the MSHCP area, this project is required to mitigate for impacts to species covered under the MSHCP. As such, mitigation is proposed to reduce potential impacts on special-status wildlife species to a less than significant level. It is reasonable to assume that other projects within the MSHCP may also be required to mitigate potential impacts to these species under the MSHCP. Therefore, the project in conjunction with other projects would not result in cumulatively significant impacts to plant or animal species. In addition, the project would not have significant cumulative impacts related to wildlife movement, biological policies or ordinances, or jurisdictional areas.

Other future development projects would be required to evaluate impacts on these issues and provide mitigation if necessary, such as through the payment of MSHCP fees. The project in conjunction with other projects would not result in cumulative impacts to biological resources.

4.2.3 - Cultural and Tribal Cultural Resources

The geographic scope of the cultural resources analysis is the immediate project vicinity.

Cultural impacts tend to be localized because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as the disruption of soils; therefore, in addition to the project site, the area near the project site would be the area most affected by project activities (usually a 500-foot radius). No known cultural resources have been found on the project site, and 12 resource sites have been recorded within a 0.5 mile of the project site. Potential impacts to cultural resources will be mitigation to a less than significant level by ensure appropriate measures are in place in the case that sensitive cultural resources are located during project ground disturbance.

There is always a possibility that unknown historic, archaeological, paleontological resources or human remains are uncovered during grading. Therefore, a project's potential impacts on unknown resources could contribute to potentially significant cumulative impacts. However, mitigation measures would reduce any potential cumulative impacts to a less than significant level. In addition, given the lack of resources found near the project site, it is unlikely that additional historic or archaeological resources would be found. It is also unlikely that such findings would result in cumulative impacts with other projects, as cultural resource impacts tend to be localized. Future development projects would be required to evaluate potential cultural resource impacts and provide mitigation as necessary. Therefore, the project in conjunction with other projects would not result in cumulatively significant impacts to cultural resources.

4.2.4 - Greenhouse Gas Emissions

There is no geographic scope for cumulative greenhouse gas impacts, because impacts are a global issue. Greenhouse gas (GHG) emissions are inherently a cumulative impact, as no single project could produce a quantity of greenhouse emissions significant enough to influence global climate

change. Although construction related GHG emissions are temporary in nature, the total amount of emission could have a substantial contribution to a project's total emissions.

The County of Riverside's Climate Action Plan (CAP) is a geographically specific plan that was adopted by the County of Riverside for the purpose of reducing GHG emissions under the control or influence of the County consistent with Assembly Bill 32 and subsequent state legislation and state agency action to address climate change. The CAP has adopted a target of reducing GHG emissions down to 15 percent below 2010 levels within the County of Riverside by 2020. This reduction target is compliant with AB 32, and is therefore consistent with the State's efforts to reduce GHG emissions globally and substantially lessen the cumulative contribution to GHG impacts. The CAP includes GHG screening tables with energy efficient implementation measures that would help to achieve the target reduction.

Pursuant to the CAP, projects that achieve at least 100 points based on the County's screening tables are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report. As such, further project-specific GHG quantification is not required. Consistent with the CEQA Guidelines, such projects are determined to have a less than significant individual and cumulative impact for GHG emissions.

As discussed in Section 3.4, Greenhouse Gas Emissions, impacts related to GHG emissions are less than significant. In addition, as shown in Table 3.4-4, in Section 3.4, the project would comply with the applicable reduction measures of the Riverside Restorative Growthprint Climate Action Plan. Impacts would be less than significant. Therefore, the project in conjunction with other projects would not result in a cumulatively significant impact to greenhouse gas emissions.

4.2.5 - Hydrology and Water Quality

The geographic scope for the cumulative hydrology and water quality analysis is the Riverside area. Hydrologic and water quality related impacts tend to be localized; therefore, the area near the project would be the area most affected by project activities. The study area of the cumulative groundwater impacts is within the jurisdiction of the Santa Ana Regional Water Quality Control Board (Region 8) and in the Santa Ana River Watershed. The implementation of Best Management Practices (BMPs) would ensure that impacts to hydrology and water quality would be less than significant. Therefore, the project in conjunction with other similar projects would not result in cumulatively significant impacts to hydrology and water quality.

4.2.6 - Land Use and Planning

The geographic scope of the cumulative land use analysis is the Riverside area and surrounding cities. The project site was located in an area of High Density Residential (HDR) and zoned for Multiple-Family Residential (MFR). The project would not physically divide an established community, or conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. However, as mentioned in above and in Section 3.2, Biological Resources, the site is within

the Western Riverside MSHCP, and mitigation measures would need to be implemented to bring such impacts to a less than significant level.

Other development projects would also be required to demonstrate consistency with applicable City of Riverside General Plan 2025, Zoning, and Municipal Code requirements, and provide mitigation as necessary to avoid any significant land use impacts or incompatibility with adjoining land uses. In addition, mitigation fees and other mitigation measures may be required for those projects located within the MHSCP area.

Therefore, the project in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to land use.

4.2.7 - Noise

The geographic scope of the noise analysis is the project vicinity, including surrounding sensitive receptors. Noise impacts tend to be localized; therefore, the area near the project site (approximately 0.25 mile) would be the area most affected by project activities.

Construction activities associated with the project have the potential to result in substantial sources of noise. As discussed in Section 3.7, Noise, construction activities could potentially exceed noise thresholds for certain receivers. Mitigation measures limiting hours of construction and implementation of best management noise reduction techniques and practices would bring impacts to a less than significant level.

Other planned and approved projects would be required to evaluate construction noise impacts and implement mitigation measures if necessary, to minimize noise impacts pursuant to local regulations. Construction noise would generally be limited to daytime hours and would be short-term in duration. Therefore, it is reasonable to conclude that construction noise from the project would not combine with noise from other projects to result in cumulatively significant noise impacts.

The project’s construction and operational vibration levels would not exceed annoyance thresholds. Because vibration is a highly localized phenomenon, vibration associated with the project would not combine with vibration from other projects because of their distances from the site. Therefore, the project would not result in a cumulatively significant vibration impact. In addition, stationary and transportation are also localized, and there is a limited potential for other projects to contribute to cumulative noise impacts beyond transportation related noise, which would not be cumulatively significant. As such, the project in conjunction with other projects would not result in cumulatively significant impacts to noise in the project vicinity.

4.2.8 - Public Services

The geographic scope of the cumulative public services analysis is the Riverside area. The project would not create significant impacts related to public services or increase the need for new or expanded facilities. The project would comply with all applicable Riverside Fire Department and building code standards to meet fire flow/pressure and emergency access requirements. Due to the

nature of the project, it is not expected to generate a significant increase in the need for fire or police services or facilities.

Other future development projects could potentially increase the needs for fire and police protection in addition to school and library facilities. Such projects may need to pay development impact fees to offset incremental increases in service demand or provided additional mitigation measures as needed. The project in conjunction with other projects, would not have cumulatively significant impacts related to public services with necessary mitigation if needed.

4.2.9 - Transportation and Traffic

The geographic scope of the cumulative transportation analysis is the Riverside area. Cumulative transportation and traffic impacts are evaluated in Section 3.9, Transportation and Traffic (see the discussion under Impact-TRANS 1). Cumulative projects are expected to generate a combined total of 25,392 daily trips, with 1447 trips in the AM peak hour and 2024 trips in the PM peak hour.

The project would contribute to unacceptable Level of Service (LOS) at the following intersections under Existing Plus Ambient Growth (Year 2022) Plus Project Plus Cumulative Traffic conditions:

1. Washington Street at Marguerita Avenue
2. Washington Street at Lincoln Avenue

These intersections area anticipated to operate at unacceptable LOS conditions under all conditions with and without the project as well. Installation of a two-phase traffic signal offset cumulative impacts associated with the Washington Street/Lincoln Avenue intersection, bringing cumulative impacts to traffic to less than significant. The installation of this improvement is subject to the approval of the City of Riverside. However, for Washington Street/Marguerita Avenue, additional capacity enhancing improvements at this key study intersection are not feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Implementation of a fair share contribution for this intersection was not identified in the traffic study, because no physical mitigation measures are feasible. Therefore, cumulative impacts at this location will remain significant and unavoidable.

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SECTION 5: ALTERNATIVES TO THE PROPOSED PROJECT

5.1 - Introduction

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6, this Draft Focused Environmental Impact Report (Draft Focused EIR) contains a comparative impact assessment of alternatives to the project. The primary purpose of this section is to provide decision makers and the general public with a reasonable number of feasible project alternatives that could attain most of the basic project objectives, while avoiding or reducing any of the project's significant adverse environmental effects. Important considerations for these alternatives analyses are noted below (as stated in CEQA Guidelines § 15126.6).

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
  - Failure to meet most of the basic project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

Alternatives to a project must be considered even if they would impede, to some degree, the attainment of project objectives or be more costly (CEQA Guidelines § 15126.6(b)). However, the range of alternatives addressed in an EIR need not be exhaustive, and is governed by a "rule of reason," which requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. Of the alternatives considered, the EIR need examine in detail only those that the lead agency determines could feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project. An EIR need not consider an alternative whose effects cannot be reasonably ascertained, whose implementation is remote and speculative, or an alternative that would not substantially lessen or avoid the significant effects of the project. CEQA Guidelines Section 15126.6(d) states that if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternatives shall be discussed, but "in less detail than the significant effects of the project as proposed."

CEQA Guidelines Section 15364 defines "feasibility" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." The determination of the feasibility of project alternatives may include, but is not limited to, factors such as: site suitability, economic viability, infrastructure availability, general plan consistency, regulatory and jurisdictional limitations, and whether the project proponent can reasonably acquire, control or otherwise have access to an alternative project site (CEQA Guidelines § 15126.6(f)(1)).

A comparison of impacts associated with the project and alternatives is provided within this section. In several cases, the description and severity of the impact may be the same under each scenario when compared with the CEQA Thresholds of Significance (i.e., both scenarios would result in a "less than significant" impact). However, the actual degree of impact may be slightly different under each scenario, and this relative difference is the basis for a conclusion of greater or lesser impacts. In addition, the alternatives analysis includes the assumption that all applicable mitigation measures associated with the project would be implemented with a given project alternative (e.g. Reduced Intensity Alternative).

An evaluation of a No Project Alternative is required by CEQA Guidelines Section 15126.6(e), and is included in this section. In addition to the No Project Alternative, a reasonable range of alternatives are analyzed and compared with the project. A No Project Alternative, Multiple-Family Residential Alternative, a Reduced Size Alternative, and Alternate Location Alternative, consistent with the General Plan, are evaluated below.

5.1.1 - Significant Unavoidable Impacts

The project would result in the following significant unavoidable impacts:

- Traffic and Transportation—the following intersections are considered to be significantly impacted under cumulative conditions:
  - Washington Street at Marguerita Avenue AM/PM Peak-Hours
  - Washington Street at Lincoln Avenue AM/PM Peak-Hours

5.1.2 - Alternatives to the Proposed Project

The four alternatives to the project analyzed in this section are as follows:

- **No Project Alternative:** Under the No Project Alternative, the site would remain in its existing condition and no development would occur.
- **Multiple-Family Residential Alternative:** Under the Multiple-Family Residential Alternative, the site would be used for a 210-unit condominium community as permitted by the current City zoning.
- **Reduced Size Alternative:** Under the Reduced Size Alternative, the project size would be reduced by 25 percent.
- **Alternate Location Alternative:** Under the Alternate Location Alternative, the project would be developed on one of four vacant lots along Victoria Avenue. Potential alternative sites include Lot B on the corner of Washington Street and Victoria Avenue, Lot C on the corner of Victoria Avenue and Grace Street, Lot D on the corner of Victoria Avenue and Madison Street, and lot E on the corner of Victoria Avenue and the opposite side of Madison Street. For purposes of this alternative analysis, only Lot B was selected and analyzed because potential impacts would be significantly similar to those occurring at the other potential sites.

The four alternatives to the project are analyzed below. These analyses compare the project and each individual project alternative. In several cases, the description of the impact may be the same under each alternative when compared with the CEQA Thresholds of Significance (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the project and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

5.2 - Project Objectives

As stated in Section 2, Project Description, the objectives of the project are to:

- **OBJ-1:** Provide an educational institution to serve the Casa Blanca Neighborhood and surrounding areas.
- **OBJ-2:** Relieve over-capacity at neighboring schools.
- **OBJ-3:** Establish new facilities in a community where the demand for additional academic services and facilities is high, particularly at the elementary school level.
- **OBJ-4:** Establish an educational facility that serves to connect and enhance an existing neighborhood.

5.3 - Alternative 1—No Project Alternative

CEQA Guidelines Section 15126.6(e) requires the discussion and evaluation of a No Project Alternative. The No Project Alternative assumes that the site would not be developed for any use and would continue to be vacant. The No Project Alternative provides a comparison between the environmental impacts of the project in contrast to the environmental impacts that could result from not approving, or denying, the project. Under the No Project Alternative, the site would remain in its existing condition and no development would occur.

Impacts from the project are compared with the No Project Alternative for each of the topical issue areas discussed in this Focused EIR in the sections that follow.

5.3.1 - Impact Analysis

Air Quality

The No Project Alternative would leave the site vacant and heavily disturbed. There would be no air quality impacts resulting from construction or operational emissions. Compared to the project, there would be no impacts to air quality, while impacts under the project would be less than significant.

Biological Resources

The No Project Alternative would leave the site vacant and heavily disturbed, which would not impact plant and animal species on-site. Impacts to biological resources would not occur, compared to the project, which would have less than significant impacts with mitigation.

Cultural Resources

The No Project Alternative would leave the site vacant and heavily disturbed. The Draft Focused EIR concluded that with mitigation, the project would have less than significant impacts on cultural resources. There would be no impacts to cultural resources under the No Project Alternative because the ground would not be disturbed as a result of project development. As such, impacts to cultural resources would not occur, compared to the project, which would have less than significant impacts with mitigation.

Greenhouse Gas Emissions

Under the No Project Alternative, the site would remain vacant and heavily disturbed. There would be no impacts related to greenhouse gas (GHG) emissions because construction and operation of the project would not occur. Compared to the project, impacts would not occur and would be less than the project, which would be less than significant.

Hydrology and Water Quality

The No Project Alternative would leave the site vacant and heavily disturbed. Impacts to hydrology and water quality would be less than the proposed project, as the existing vacant land cover would serve as a pervious surface in the event of flooding. While the project would create an impervious surface on the project site, impacts would be brought to a less than significant level through the implementation of Best Management Practices (BMPs). Therefore, impacts related to hydrology and water quality under the No Project Alternative would not occur, while impacts under the project would be less than significant.

Land Use and Planning

The No Project Alternative would leave the site vacant and heavily disturbed. There would be no impacts to land use or impacts to consistency with Southern California Association of Governments (SCAG) policies. Because the project would not be constructed, impacts to land use and planning would not occur and therefore be less than the project, which would have less than significant impacts with mitigation incorporated.

Noise

The site would remain vacant and heavily disturbed under the No Project Alternative. Impacts related to noise would not occur. Construction and other project related noise would not be present. Impacts under the No Project Alternative would therefore be less than those associated with the proposed project.

Public Services

The No Project Alternative would leave the site vacant and heavily disturbed. Therefore, this alternative would not create or increase the need for police, fire, school, or other public services. This alternative would have lesser impacts to public services compared with the project which would result in less than significant impacts to public services.

Transportation and Traffic

The No Project Alternative would leave the project site vacant and heavily disturbed, resulting in fewer impacts to local intersections surrounding the project area. While one intersection is already operating at an unacceptable level of service, impacts would be less than significant compared with the project because project related vehicle trips and traffic would not occur, adding additional vehicles to the current traffic situation. The No Project Alternative would avoid the additional significant and unavoidable traffic impacts associated with the project.

5.3.2 - Conclusion

While the No Project Alternative would reduce all impacts associated with construction and operation of the project except for traffic, this alternative does not meet the objectives outlined for the project. Because the project would not occur, an educational facility providing economic opportunities for those in the Casa Blanca Neighborhood would not be available. Table 5-1 provides a summary in comparison of each issue area for all alternatives to the project.

5.4 - Alternative 2—Multi-Family Residential Alternative

Implementation of the Residential Alternative would involve development of the project site into a 210-residential unit condominium community with 414 parking stalls and private open space, as permitted by the City. Approximately 35 six-unit buildings designed in Spanish and Farmhouse architectural styles would be constructed. Each 35-unit building would include two 1-bedroom, 2-bedroom, and 3- bedroom units, each with a private patio. 1-bedroom units would include a 1-car garage, and a 2-car garage would be included with the two and three bedroom units.

Usable open space would include a decomposed granite jogging path, paseos, open play areas, a tot lot with shade structures, community garden, and exercise equipment stations totaling 54,789 square feet. Access to the development would occur through two driveways on Lincoln Avenue. The project does not propose gates to secure the site along Lincoln Avenue. The project proposes 19.58 dwelling units per acre. The following discussion evaluates the potential environmental impacts associated with the Multiple-Family Residential Alternative compared with impacts from the proposed project.

5.4.1 - Impact Analysis

Air Quality

The Draft Focused EIR concludes that the project would have less than significant impacts related to air quality with the incorporation of mitigation measures. Impacts to air quality under the Multiple-Family Residential Alternative would be similar to the project, because roughly the same amount of ground surface would be disturbed, and the Multiple-Family Residential Alternative would require a similar amount of grading and construction. Thus, impacts related to air quality under both the proposed project and the Multiple-Family Residential Alternative would be less than significant with mitigation incorporated.

Biological Resources

Potential impacts to biological resources relate to effects on candidate, sensitive, or special status species; conflicts with local policies or ordinances protecting biological resources; and effects on federal and State jurisdictional waters. The Draft Focused EIR concludes that impacts on biological resources would be less than significant with implementation of mitigation. As the Multiple-Family Residential Alternative would permanently alter a similarly sized area, impacts to biological resources under the Multiple-Family Residential Alternative would also be less than significant with mitigation, similar to the project.

Cultural and Tribal Cultural Resources

The Draft Focused EIR concludes that the project would have less than significant impacts on cultural resources with mitigation incorporated. Impacts to cultural resources under the Multiple-Family Residential Alternative would be similar to those under the proposed project. A similar amount of ground disturbance would occur from grading and construction related activities, and there would be a similar potential to inadvertently discover buried cultural resources during construction. Impacts would be similar to those of the project, and mitigation measures would be required.

Greenhouse Gas Emissions

Impacts to GHG emissions under the Multiple-Family Residential Alternative would be similar to the project due to similar construction and operational emissions. Therefore, impacts under this alternative would be less than significant, similar to the project.

Hydrology and Water Quality

The Draft Focused EIR concludes that the project would result in less than significant impacts related to hydrology and water quality. The Multiple-Family Residential Alternative would create impervious surfaces on the project site. However, with the implementation of required BMPs, impacts would be reduced to a less than significant level. Therefore, impacts to hydrology and water quality under the Multiple-Family Residential Alternative would be less than significant, similar to the proposed project.

Land Use and Planning

The Draft Focused EIR concludes that under the proposed project, impacts to land use and planning would be less than significant, or less than significant with mitigation. The project site is designated as High Density Residential (HDR), which allows for the development of houses, condominiums, and apartments with a maximum density of 29 dwelling units per acre. The Multiple-Family Residential Alternative complies with this designation, therefore complying with the General Plan. The Multiple-Family Residential Alternative would not divide an existing community or result in impacts to other areas related to land use. Impacts to land use and planning under the Residential Alternative would also be less than significant with mitigation, similar to the project.

Noise

Impacts to noise under the Multiple-Family Residential Alternative would be similar to those from the proposed project. Although the proposed development under the Multiple-Family Residential Alternative would differ from the elementary school project, construction related noise impacts would likely be the same, resulting in a less than significant impact.

Public Services

Project impacts related to public services were found to be less than significant. The Multiple-Family Residential Alternative would involve the development of a 210-unit condominium community. The Multiple-Family Residential Alternative has the potential to create a greater demand for public services than the proposed project. However, it is not likely that this alternative would significantly increase demands for such services, resulting in less than significant impacts. Impacts to public services would be less than significant, similar to the project.

Transportation and Traffic

The Multiple-Family Residential Alternative would involve the development of a 210-unit condominium community. Traffic and transportation impacts would be significant and unavoidable, similar to the project, at specific intersections near the project site. Similar mitigation measures compared to the project would be required to mitigate potential significant and unavoidable traffic impacts to the intersections of Washington Street and Lincoln Avenue and Washington Street and Marguerita Avenue. However, impacts to Washington Street and Marguerita Avenue would remain significant and unavoidable, as mitigation is not feasible, similar to the project.

5.4.2 - Conclusion

The Multiple-Family Residential Alternative would result in similar significant and unavoidable impacts to traffic compared to the project due to an increase in vehicle trips. The remaining issues under the Multiple-Family Residential Alternative would be less than significant, similar to the proposed project.

The Multiple-Family Residential Alternative would not meet any of the objectives of the project, because it proposes something entirely different from the original project. The Multiple-Family Residential Alternative would not provide an educational institution to relieve over-capacity of other schools or to connect or enhance the Casa Blanca Neighborhood.

5.4.3 - Alternative 3—Reduced Size Alternative

Implementation of the Reduced Size Alternative would involve construction of the project, but at a 25 percent smaller scale to reduce the significant and unavoidable traffic impacts resulting from the full scale project. As a result, the Reduced Size Alternative would also accommodate a reduced capacity of students attending the proposed elementary school.

5.4.4 - Impact Analysis

Air Quality

The Draft Focused EIR concludes that impacts related to air quality are less than significant with the incorporation of mitigation. While the Reduced Size Alternative would disturb less ground on the project site and involve slightly less grading and construction activity compared to the project, any differences in emissions would be negligible. There would be no changes in impacts under the Reduced Intensity Alternative; impacts to air quality would be less than significant with mitigation incorporated, similar to the project.

Biological Resources

Because the Reduced Size would still require the disturbance of land as part of development of the project, impacts to biological resources would be similar compared to the proposed project. The reduction in size as part of the Reduced Intensity Alternative would not be significant enough to completely reduce impacts compared to the project. The Reduced Intensity Alternative would likely also require the incorporation of mitigation measures for biological resources, similar to the project, because disturbance and construction of the site would still occur. Impacts under the Reduced Intensity Alternative would be less than significant with mitigation, similar to the project.

Cultural and Tribal Cultural Resources

Potential impacts on cultural resources would result from construction activities such as grading. The Reduced Size Alternative would disturb the same area as the project, likely resulting in similar impacts. Impacts on cultural resources for the project and the Reduced Size Alternative would be less than significant with mitigation, similar to the impacts of the proposed project.

Greenhouse Gas Emissions

Greenhouse gas emissions under the Reduced Size Alternative would be less compared to the project due to the smaller scale of development. However, impacts under the Reduced Size Alternative would also be less than significant, similar to the project.

Hydrology and Water Quality

The Reduced Size Alternative would develop a project similar to the proposed project, but at a 25 percent smaller size. Impacts on hydrology and water quality under this alternative would likely be similar to the project, as a similar development would be constructed. Therefore, the Reduced Size Alternative would result in less than significant impacts related to hydrology and water quality, similar to the proposed project.

Land Use and Planning

The Reduced Size Alternative would develop a similar project, although the building area would be reduced by 25 percent, and as a result, the Reduced Size Alternative would accommodate fewer students. The Reduced Size Alternative would not divide an existing community or conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted

for the purpose of avoiding or mitigating an environmental effect. The Reduced Size Alternative includes development similar to the project, although the buildings would be at a smaller scale. As mentioned above, the Reduced Size Alternative would not divide an existing community or conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, as with the proposed project, impacts on land use and planning would be less than significant with mitigation.

Noise

The Reduced Size Alternative would generate less long-term traffic noise, since this alternative would result in fewer vehicle trips to the project site than the project. However, the remaining students would presumably continue to be bused to other district campuses, as applicable. The Reduced Intensity Alternative would not create a substantial permanent increase in ambient noise levels. Short-term noise impacts during construction would be less than significant with the implementation of mitigation measures. Therefore, short and long-term noise impacts resulting from the Reduced Intensity Alternative would be less than significant, similar to the proposed project. The Reduced Intensity Alternative would have slightly reduced noise impacts compared with the project as a result of fewer vehicle trips. However, impacts would still be similar to those of the project, which would also be less than significant.

Public Services

The Reduced Size Alternative would result in a 25 percent smaller sized development compared to the proposed project. The Draft Focused EIR concludes that impacts on public services resulting from the project would be less than significant. The Reduced Intensity Alternative would accommodate fewer students due to the smaller size, decreasing the potential need for public services. However, due to the reduction in size and capacity for students, the remaining 200 students not attending Casa Blanca Elementary would require bussing to other schools. Impacts on public services would be less than significant under the proposed project, and the Reduced Size Alternative would result in similar impacts. Impacts to public services under the Reduced Size Alternative would also be less than significant.

Transportation and Traffic

The project is expected to generate a total of 1,512 daily trips. Impacts to traffic and transportation under the Reduced Size Alternative would be less than impacts from the proposed project. Because the Reduced Size Alternative would accommodate fewer students, it is expected that vehicle trips would also be fewer under this alternative. Students not attending Casa Blanca Elementary would continue to be bussed to other locations in the District, and therefore it is not likely that impacts related to transportation and traffic would be significantly reduced compared to the project.. Impacts to the intersection of Washington Street and Marguerita Avenue may be reduced due to the reduction in vehicle trips of the Reduced Size Alternative, however, still resulting in a significant and unavoidable impact, similar to the project.

5.4.5 - Conclusion

Because of the 25 percent reduction in the size of the project, impacts under the Reduced Intensity Alternative would be less than the project for a number of resource areas. However, impacts related to transportation and traffic would remain significant and unavoidable under the Reduced Size Alternative, similar to the project.

The Reduced Size Alternative would meet most of the project objectives because it is consistent with the use and purpose identified under the proposed project. However, the relief of over-capacity from neighboring schools would be less than the project due the reduced size. The Reduced Size Alternative would still provide educational opportunities to those in the Casa Blanca Neighborhood; however, the reduction in size would not accommodate the already existing population of 800 students, and therefore objective one would not be achieved. Lastly, the Reduced Size Alternative would not meaningfully reduce the significant environmental impacts that would occur under the project despite the smaller building footprint, since the intersection of Washington Street and Marguerita Avenue operates at an unacceptable level of LOS and would continue to do so under the project and under the Reduced Size Alternative as no mitigation is not feasible.

5.5 - Alternative 4—Alternate Location Alternative

Implementation of the Alternate Location Alternative would involve development of the project on a site different from the proposed project site on Lincoln Avenue. Potential alternative sites include Lot B on the corner of Washington Street and Victoria Avenue, Lot C on the corner of Victoria Avenue and Grace Street, Lot D on the corner of Victoria Avenue and Madison Street, and lot E on the corner of Victoria Avenue and the opposite side of Madison Street. All four alternative lots were originally considered during the initial planning process. For the purposes of this alternative analysis, only Lot B is analyzed, since impacts related to development at any of the alternative locations would be substantially similar to those associated with development on Lot B.

Air Quality

Impacts on air quality under the Alternate Location Alternative would be the same compared to the project. The only change would be the location of the project, which would not change the level of significance of air quality impacts. Impact related to air quality would be less than significant with mitigation incorporated, similar to the project.

Biological Resources

The Alternate Location Alternative would change the existing location of the project to Lot B on the corner of Washington Street and Victoria Avenue. Lot B is also vacant, and impacts to biological resources would be similar to the project, less than significant with mitigation.

Cultural Resources

Impacts on cultural resources would likely be similar compared to the project because the development would be the same as the proposed project, just in a different location. There would

still be the potential discover cultural resources during the construction process. Impacts to cultural resources would be less than significant with mitigation, similar to the project.

Greenhouse Gas Emissions

Pursuant to the CAP, and discussed in further detail in Section 3.4, Greenhouse Gas Emissions, projects that achieve at least 100 points based on the County's screening tables are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report. As such, further project-specific GHG quantification is not required. Consistent with CEQA Guidelines, such projects are determined to have a less than significant individual and cumulative impact for GHG emissions. The Draft Focused EIR concludes that the project would have less than significant impacts related to GHG emissions. Therefore, because the Alternate Location Alternative would contain similar land use as the project, impacts to GHG emissions would also be less than significant.

Hydrology and Water Quality

The Alternate Location Alternative would change the location of the existing project site to the vacant Lot B along Victoria Avenue. Because only the location of the project would change, impacts under the Alternate Location Alternative would be the same as the project. Therefore, impacts related to hydrology and water quality under the Alternate Location Alternative would be less than significant, similar to the proposed project.

Land Use and Planning

The Alternate Location Alternative would construct the project on vacant Lot B along Victoria Avenue. According to the Farmland Mapping and Monitoring Program, Lot B is considered Farmland of Local Importance.

This alternative would conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect, resulting in land use impacts greater than those of the project. The Alternate Location Alternative would impact farmland of local importance, thus rendering this alternative unsuitable. Impacts to land use and planning would be significant and unavoidable, greater than the project.

Noise

Noise impacts under the Alternate Location Alternative would be less than the project, due to the location of Lot B. Noise resulting from the Alternate Location Alternative would be reduced because of the surrounding vegetation, surrounding vacant land and greater proximity to housing. Impacts to noise under the Alternate Location Alternative would be less than the project, which would result in less than significate impacts to noise.

Public Services

Implementation of the Alternate Location Alternative would construct and operate the project on vacant Lot B along Victoria Avenue. While the location of the project would change, the development size and estimated number of students attending the school would remain the same.

Impacts to public services under the original project were determined to be less than significant. Because the location is the only difference under this alternative, demand for public services would be the same compared to the project, and impacts would be less than significant.

Transportation and Traffic

Implementation of the Alternate Location Alternative would construct and operate the project on vacant Lot B along Victoria Avenue. Impacts on traffic would potentially be worse at any of the proposed alternative locations along Victoria Avenue because that Victoria Avenue is a two-lane road, with one lane for traffic each way. Additional traffic impacts would occur at stop sign locations at Madison Street and Victoria Avenue. Impacts associated with the Alternate Location Alternative would likely be greater compared to the project.

5.5.1 - Conclusion

The Alternate Location Alternative would not eliminate the significant adverse and unavoidable impact that would result from the proposed project. Rather, this alternative would result in additional impacts compared to the project. Land Use and Traffic impacts would be greater under the Alternate Location Alternative, because Lot B is considered Farmland of Local Importance, and because Victoria Avenue is a two-lane street, allowing one car each way. In addition, Alternate Location Alternative would impact farmland of local importance.

While air quality impacts would be similar to the proposed project, traffic impacts could potentially be greater due to the street features and roadway limitations at the alternate locations.

The Alternate Location Alternative would meet all of the project objectives. Because this alternative is the same as the proposed project, objectives regarding the provision of an educational institution for the Casa Blanca Neighborhood and relief of over-capacity from other schools would be realized under this alternative.

5.6 - Environmentally Superior Alternative

As required by CEQA Guidelines Section 15126.6, one of the alternatives must be identified as an Environmentally Superior Alternative. The Environmentally Superior Alternative is the one that would result in the fewest or least significant impacts. If the Environmentally Superior Alternative is the No Project Alternative, as in this case, then an Environmentally Superior Alternative must be selected from the remaining alternatives.

Table 5-1 provides a summary of each alternative related to the environmental issues evaluated in Section 3, Environmental Impact Analysis, of this Draft Focused EIR, and includes the level of significance associated with the project in order to facilitate a thorough comparison of the alternatives. Refer to Section 3, Environmental Impact Analysis, of this document for a detailed discussion of each environmental issue. For some impacts, while the alternative may have a reduced level of impact, impacts would still be considered significant and unavoidable. With the exception of the No Project Alternative, none of the other alternatives completely eliminate the significant, adverse, and unavoidable traffic impacts that would result from implementing the proposed project.

However, both the No Project Alternative and the Reduced Intensity alternatives would reduce vehicle trips compared with the project.

The lower number of vehicle trips generated by the No Project Alternative compared with the Reduced Intensity Alternative would also result in a commensurate reduction of traffic-generated impacts with respect to air quality, GHGs, and noise. The No Project Alternative would result in lesser impacts in all issue areas compared to the project, while the Reduced Intensity Alternative resulted in similar impacts for all issue areas.

This is because the No Project Alternative would reduce the significant and unavoidable impacts that would occur under the project more than the Reduced Intensity Alternative would. However, as discussed above, this alternative does not achieve any of the objectives of the project.

While the No Project Alternative seems like the best option because of the absence of impacts, it does not meet any of the project objectives. The environmentally superior alternative would therefore be the proposed project, even though impacts to traffic would remain significant and unavoidable. This is because mitigation is feasible for one of the intersections operating at an unacceptable Level of Service (LOS). The intersection currently operating at an unacceptable LOS would still operate at this level with or without project implementation. Therefore, the project should be constructed to meet the objectives of providing an educational institution for those in the Casa Blanca Neighborhood and to provide relief from over-capacity at neighboring schools in the surrounding area.

Table 5-1: Summary of Alternatives

Environmental Topic Area	Proposed Project	No Project Alternative	Reduced Size Alternative	Multi-Family Residential Alternative	Alternate Location Alternative
Air Quality	LTS	L	E	E	E
Biological Resources	LTS	L	E	E	E
Cultural and Tribal Cultural Resources	LTS	L	E	E	E
Greenhouse Gas Emissions	LTS	L	E	E	E
Hydrology and Water Quality	LTS	L	E	E	E
Land Use and Planning	LTS	L	E	E	L
Noise	LTS	L	E	E	L
Public Services	LTS	L	E	E	E
Transportation and Traffic	SIG	L	L	E	G

Notes:
L = Lesser impact than the project.
G = Greater impact than the project.
LTS = Less than Significant.
E = Equivalent impact to the project.
SIG = Significant, Adverse and Unavoidable.
Source: FirstCarbon Solutions 2018.

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SECTION 6: OTHER CEQA CONSIDERATIONS

6.1 - Significant Unavoidable Impacts

California Environmental Quality Act (CEQA) Guidelines Section 15126.2(a)(b) requires an Environmental Impact Report (EIR) to identify and focus on the significant environmental effects of the project, including effects that cannot be avoided if the project were implemented.

This section describes significant impacts, including those that can be mitigated but not reduced to a level of less than significant. Where there are impacts that cannot be alleviated without imposing a project alternative, their implications, and the reason why the project is being proposed, notwithstanding their effect, is described. Each significant unavoidable impact is discussed below. With implementation of the project, only significant and unavoidable impacts to transportation and traffic would occur. All other project impacts can be reduced to a less than significant level.

- **Transportation and Traffic:** The project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian bicycle paths, and mass transit.
  - The project would contribute to the continued operation of the intersection of Washington Street at Marguerita Avenue at an unacceptable level of service (LOS), and will cause the intersection of Washington Street at Lincoln Avenue to operate at an unacceptable level of service at project completion. Mitigation measures are proposed to reduce impacts to a less than significant level; however, mitigation is not feasible at the Washington Street/Marguerita Avenue intersection, and therefore impacts at that location will continue to remain significant and unavoidable. For additional information, refer to Section 3.9, Transportation.

6.2 - Growth-Inducing Impacts

A project can have two types of growth-inducing impacts: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines § 15126.2(d)). The CEQA Guidelines, as interpreted by the City, state that a significant growth-inducing impact may result if the project would:

- Induce substantial population growth in an area (for example, by proposing new homes and commercial or industrial businesses beyond the land use density/intensity envisioned in the general plan);
- Substantially alter the planned location, distribution, density, or growth rate of the population of an area; or

- Include extensions of roads or other infrastructure not assumed in the general plan or adopted capital improvements project list, when such infrastructure exceeds the needs of the project and could accommodate future developments.

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth, may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

The project site is located on a vacant lot in Riverside that was previously used for the KPRO 1570 AM Radio Station. The project would develop a K-6 elementary school campus known as Casa Blanca Elementary School with the capacity to serve up to 800 students. The project would serve students living in the Casa Blanca Neighborhood. The project would accommodate up to 800 students who are currently attending other schools in the project vicinity. An increase in the total Riverside Unified School District (RUSD) student population is not proposed. The project is non-residential in nature and does not have the potential to directly increase population growth. While there would be an increase in new teachers, the staff associated with the project would be a mix of new hires and transfers from RUSD schools.

Implementation of the project would not require the extension of electrical, natural gas, or water utility infrastructure, but would require connections to existing utilities on and adjacent to the project site. The project would not result in indirect growth, as all students planned to attend currently reside within the Casa Blanca Neighborhood. Additionally, the project would not result in the construction of new homes, roads or other infrastructure, as indicated in the Population and Housing Section of the preceding Casa Blanca Elementary School Initial Study, refer to Appendix A. Therefore, the project would not negatively alter the job/housing balance, or be inconsistent with the City of Riverside General Plan 2025 direct growth projections for the City, implementation of the project would have a less than significant growth-inducing impact.

6.3 - Significant Irreversible Environmental Changes

As mandated by CEQA Guidelines Section 15126.2(c), the EIR must address significant irreversible environmental changes that would result from implementation of the project. Specifically, such an irreversible environmental change would occur if:

- The project would involve a large commitment of nonrenewable resources;
- Irreversible damage can result from environmental accidents associated with the project; and

- The proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy).
- Approval and implementation of actions related to the project would result in an irretrievable commitment of non-renewable resources such as energy supplies and other construction related materials. The energy resource demands would be used for construction, heating, and cooling of buildings; transportation of people and goods; heating and refrigeration; lighting; and other associated energy needs.

The project involves the construction and operation of a K-6 elementary school in the City of Riverside. Construction and demolition debris recycling practices would be expected to allow for the recovery and reuse of building materials such as concrete, lumber, and steel and would limit disposal of these materials, some of which are non-renewable.

Environmental changes with implementation of the project would occur as the physical environment is altered through continued commitments of land and construction materials to urban development. There would be an irretrievable commitment of materials used in construction. Nonrenewable resources would be committed primarily in the form of fossil fuels and would include fuel, oil, natural gas, and gasoline used by vehicles and equipment associated with implementation of the project.

The consumption of other non-renewable or slowly renewable resources would result from the development of the project. These resources would include but would not be limited to lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, and water.

The project is not anticipated to result in significant irreversible environmental damage because pursuant to CEQA Guidelines (§ 15126.2(c)), the project does not meet any of the three scenarios listed above. Irreversible damage is not anticipated from environmental accidents associated with the project, as it will comply with all applicable local and state regulations regarding handling and storage of hazardous materials. While a large commitment to nonrenewable resources would be required, the project would be required to comply with energy efficiency standards which would reduce overall energy consumption.

6.4 - Energy Conservation

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the

State Resources Agency created Appendix F of the CEQA Guidelines. Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the project will not result in the wasteful, inefficient, and unnecessary consumption of energy, will not cause the need for additional natural gas or electrical energy-producing facilities, and, therefore, will not create a significant impact on energy resources.

6.4.1 - Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the United States Department of Transportation (DOT), the United States Department of Energy, and the United States Environmental Protection Agency (EPA) have substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. At the State level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from setting State fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and State energy-related laws and plans are discussed below.

Federal Energy Policy and Conservation Act

The Federal Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the United States would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the DOT, is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 miles per gallon. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model; rather, compliance is determined on the basis of each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. The Corporate Average Fuel Economy (CAFE) program, which is administered by EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer, based on city and highway fuel economy test results and vehicle sales. On the basis of the information generated under the CAFE program, the DOT is authorized to assess penalties for noncompliance. In the course of its over 30-year history, this regulatory program has resulted in vastly improved fuel economy throughout the nation's vehicle fleet.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) such as the Southern California Association of Governments (SCAG) were required to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process for specific projects would then address these policies. Another requirement was to consider the consistency of transportation planning with federal, State, and local energy goals. Through this requirement, energy consumption was expected to become a decision criterion, along with cost and other values that determine the best transportation solution.

The Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The State Energy Plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the State Energy Plan identifies a number of strategies, including providing assistance to public agencies and fleet operators, encouraging urban designs that reduce vehicle miles traveled, and accommodating pedestrian and bicycle access.

Title 24, Energy Efficiency Standards

Title 24, which was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings. According to the CEC, since the energy efficiency standards went into effect in 1978, it is estimated that California residential and nonresidential consumers have reduced their utility bills by at least $15.8 billion. The CEC further estimated that by 2011, residential and nonresidential consumers will have saved an additional $43 billon in energy costs.

For each year of construction, in both newly constructed buildings and alterations to existing buildings, the 2013 Standards (for residential and nonresidential buildings) were expected to reduce the growth in electricity use by 555.5 gigawatt-hours per year (GWh/y) and to reduce the growth in peak electrical demand by 148.4 MW. The 2013 Standards were also expected to reduce the growth in natural gas use by 7.04 million therms per year (therms/y) beyond the prior 2008 Standards. Overall, the 2013 Standards used 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Standards.

For purposes of reference, single-family homes built to the newly adopted 2016 standards (which went into effect on January 1, 2017) will use about 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards. In 30 years, California will have saved enough energy to power 2.2 million homes, reducing the need to build 12 additional power plants.

Because the adoption of Title 24 post-dates the adoption of AB 1575, it has generally been the presumption throughout the State that compliance with Title 24 (as well as compliance with the federal and State regulations discussed above) ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy. As is the case with other uniform building codes, Title 24 is designed to provide certainty and uniformity throughout the State while ensuring that the efficient and non-wasteful consumption of energy is carried out through design features. Large infrastructure transportation projects that cannot adhere to Title 24 design-build performance standards may, depending on the circumstances, undertake a more involved assessment of energy conservation measures in accordance with some of the factors set forth in Appendix F of the CEQA Guidelines. As an example, pursuant to the California Department of Transportation (Caltrans) CEQA implementation procedures and FHWA Technical Advisory 6640.8A, a detailed energy study is generally only required for large-scale infrastructure projects. However, for the vast majority of residential and nonresidential projects, adherence to Title 24 is deemed necessary to ensure that no significant impacts occur from the inefficient, wasteful, and unnecessary consumption of energy. As a further example, the adoption of federal vehicle fuel standards, which have been continually improved since their original adoption in 1975, have also protected against the inefficient, wasteful, and unnecessary use of energy.

According to the CEC, reducing energy use has been a benefit to all. Building owners save money, Californians have a more secure and healthy economy, the environment is less negatively impacted, and our electrical system can operate in a more stable state. The 2005 Standards (for residential and nonresidential buildings) are expected to reduce the growth in electricity use by 479 GWh/y and reduce the growth in natural gas use by 8.9 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 143 GWh/y of electricity savings and 0.5 million therms. Additional savings result from the application of the Standards on building alterations. In particular, requirements for cool roofs, lighting, and air distribution ducts are expected to save about 175 GWh/y of electricity. These savings are cumulative—doubling in two years, tripling in three, etc. Table 6-1 provides a summary of the electricity savings envisioned by the 2005 standards.

Table 6-1: Electricity Savings Projected from the 2005 Standards

Category	2001 Standard (GWh)	2005 Standard (GWh)	Savings (GWh)	Percent Reduction
Lighting	861.6	777.5	84.1	9.8
Heating	38.8	36.9	1.9	4.9
Cooling	537.5	501.5	35.9	6.7
Fans	424.7	403.6	21.1	5.0
Total	**1,862.6**	**1,719.5**	**143.0**	**7.7**

Note:
GWh = Gigawatt hours
Source: California Energy Commission 2005.

Since the California 2000–2001 electricity crisis, the CEC has placed greater emphasis on demand reductions. Changes in 2001 (following the electricity crisis) reduced electricity demand for newly constructed residential and nonresidential buildings by about 110.3 megawatts (MW) each year. Newly constructed nonresidential buildings account for 44 MW of these savings. Like energy savings, demand savings accumulate each year. The 2005 Standards are expected to reduce electric demand by another 180 MW each year. Table 6-2 provides a summary of the demand savings envisioned by the 2005 standards.

Table 6-2: Demand Savings Projected from the 2005 Standards

Category	2001 Standard (MW)	2005 Standard (MW)	Savings (MW)	Percent Reduction
Lighting	157.9	142.6	15.3	9.7
Heating	3.6	3.5	0.1	2.2
Cooling	276.7	253.1	23.6	8.5
Fans	79.7	74.6	5.0	6.3
Total	**517.9**	**473.9**	**44.0**	**8.5**

Note:
MW = Megawatts
Source: California Energy Commission 2005.

In many parts of the world, the wasteful and poorly-managed use of energy has led to oil spills, acid rain, smog, and other forms of environmental pollution that have ruined the natural beauty people seek to enjoy. California is not immune to these problems, but the CEC-adopted appliance standards, building standards, and utility programs that promote efficiency and conservation have gone a long way toward maintaining and improving environmental quality. Other benefits include reduced destruction of natural habitats, which, in turn, helps protect wildlife, plants, and natural systems.

Many experts believe that burning fossil fuel is a major contributor to global warming; carbon dioxide is being added to an atmosphere already containing 25 percent more than it did two

centuries ago. Carbon dioxide and other greenhouse gases create an insulating layer around the Earth that leads to global climate change. CEC research shows that most of the sectors of the State economy face significant risk from climate change, including agriculture, forests, and the natural habitats of a number of indigenous plants and animals.

Scientists recommend that actions be taken to reduce emissions of carbon dioxide and other greenhouse gases. While adding scrubbers to power plants and catalytic converters to cars are steps in the right direction (both of which are currently enforced as part of existing regulatory schemes), the use of energy-efficient standards can be effective actions to limit the carbon dioxide that is emitted into the atmosphere. According to the CEC, using energy efficiently, in accordance with Title 24 Energy Efficiency standards, is a proven, far-reaching strategy that can and does present an important contribution to the significant reduction of greenhouse gases.

In fact, the National Academy of Sciences has urged the country to follow California's lead on such efforts, and it has recommended that energy efficiency building codes modeled after Title 24 be adopted nationwide. The CEC's Title 24 program has played a vital, if not the most important, role in maximizing energy efficiency and preventing the wasteful, inefficient, and unnecessary use of energy throughout the State.

The CEC's 2005 Energy Efficiency Standards include the following:

- **Time Dependent Valuation (TDV).** Source energy was replaced with TDV energy. TDV energy values energy savings greater during periods of likely peak demand, such as hot summer weekday afternoons, and values energy savings less during off-peak periods. TDV gives more credit to measures such as daylighting and thermal energy storage that are more effective during peak periods.
- **New Federal Standards.** Coincident with the 2005 Standards, new standards for water heaters and air conditioners took effect. These changes affect all residential buildings, but they also affect many nonresidential buildings that use water heaters and/or residential-size air conditioners.
- **New Lighting in Historic Buildings.** The exception to the Standards requirements for historic buildings has changed for lighting requirements so that only specific historic or historic replica components are exempt.
- **Cool Roofs.** The nonresidential prescriptive standards require cool roofs-high-reflectance, high-emittance roof surfaces or exceptionally high-reflectance and low-emittance surfaces-in all low-slope applications. The cool-roof requirements also apply to roof replacements for existing buildings.
- **Acceptance Requirements.** Basic "building commissioning," at least on a component basis, is required for electrical and mechanical equipment that is prone to improper installation.
- **Demand Control Ventilation.** Controls that measure CO_2 concentrations and vary outside air ventilation are required for spaces such as conference rooms, dining rooms, lounges, and gyms.

- **T-bar Ceilings**. Placing insulation directly over suspended ceilings is not permitted as a means of compliance, except for limited applications.
- **Relocatable Public School Buildings.** Special compliance approaches are added for relocatables so they can be moved anywhere statewide.
- **Duct Efficiency.** R-8 duct insulation and duct sealing with field verification is required for ducts in unconditioned spaces in new buildings. Duct sealing is also required in existing buildings when the air conditioner is replaced. Performance methods may be used to substitute a high-efficiency air conditioner in lieu of duct sealing.
- **Indoor Lighting.** The lighting power limits for indoor lighting are reduced in response to advances in lighting technology.
- **Skylights for Daylighting in Buildings.** The prescriptive standards require that skylights with controls to shut off the electric lights are required for the top story of large, open spaces (spaces larger than 25,000 feet with ceilings higher than 15 feet).
- **Thermal Breaks for Metal Building Roofs.** Continuous insulation or thermal blocks at the supports are required for metal building roofs.
- **Efficient Space Conditioning Systems.** A number of measures are required that improve the efficiency of heating, ventilation, and air conditioning (HVAC) systems, including variable-speed drives for fan and pump motors greater than 10 horsepower, electronically-commutated motors for series fan boxes, improved controls, efficient cooling towers, and water-cooled chillers for large systems.
- **Unconditioned Buildings.** New lighting standards-lighting controls and power limits-apply to unconditioned buildings, including warehouses and parking garages. Lighting power tradeoffs are not permitted between conditioned and unconditioned spaces.
- **Compliance Credits.** Procedures are added for gas cooling, underfloor ventilation.
- **Lighting Power Limits.** The Standards set limits on the power that can be used for outdoor lighting applications such as parking lots, driveways, pedestrian areas, sales canopies, and car lots. The limits vary by lighting zones or ambient lighting levels. Lighting power tradeoffs are not permitted between outdoor lighting and indoor lighting.
- **Shielding.** Luminaires in hardscape areas larger than 175 watts are required to be cutoff luminaires, which will save energy by reducing glare.
- **Bi-level Controls.** In some areas, outdoor lighting controls are required, including the capability to reduce lighting levels to 50 percent.
- **Lighting Power Limits.** Lighting power limits (or alternative equipment efficiency requirements) apply to externally and internally illuminated signs used either indoors or outdoors.

Pursuant to the California Building Standards Code and the Title 24 Energy Efficiency Standards, the County will review the design and construction components of the project's Title 24 compliance when specific building plans are submitted.

6.4.2 - Energy Requirements of the Proposed Project

Short-term construction and long-term operational energy consumption associated with the proposed project are discussed below.

Short-Term Construction

The EPA regulates non-road diesel engines that power both mobile equipment (e.g., bulldozers, scrapers, front end loaders, etc.) and stationary equipment (e.g., generators, pumps, compressors, etc.). The EPA has no formal fuel economy standards for nonroad (e.g., construction) diesel engines but does regulate diesel emissions, which indirectly affects fuel economy. In 1994, EPA adopted the first set of emission standards ("Tier 1") for all new nonroad diesel engines greater than 37 kilowatts (kW) or 50 horsepower. The Tier 1 standards were phased in for different engine sizes between 1996 and 2000, reducing nitrogen oxide (NO_X) emissions from these engines by 30 percent. Subsequently, the EPA adopted more stringent emission standards for NO_X, hydrocarbons, and particulate matter from new nonroad diesel engines. This program included the first set of standards for nonroad diesel engines less than 37 kW. It also phased in more stringent "Tier 2" emission standards from 2001 to 2006 for all engine sizes and added yet more stringent "Tier 3" standards for engines between 37 and 560 kW (50 and 750 horsepower) from 2006 to 2008. These standards further reduced nonroad diesel engine emissions by 60 percent for NO_X and 40 percent for particulate matter (PM) from Tier 1 emission levels. In 2004, EPA issued the Clean Air Nonroad Diesel Rule. This rule cut emissions from nonroad diesel engines by more than 90 percent, and was phased in between 2008 and 2014. These emission standards are intended to promote advanced clean technologies for nonroad diesel engines that improve fuel combustion, but they also result in slight decreases in fuel economy.

Development of the project would include short-term construction activities that would consume energy, primarily in the form of diesel fuel (e.g., mobile construction equipment) and electricity (e.g., power tools). Construction activities would be subject to applicable regulations such as anti-idling measures, limits on duration of activities, and the use of alternative fuels, thereby reducing energy consumption.

Construction equipment is widely available throughout the region and is subject to the aforementioned EPA emissions standards. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region. Therefore, it is expected that construction fuel consumption associated with the project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Long-Term Operations

Transportation Energy Demand

Vehicle fuel efficiency is regulated at the federal level. Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards and for revising existing standards. As of December 2014, NHTSA indicated that the fuel economy of passenger vehicles averaged 34.2 miles per gallon and light trucks averaged 26.2 miles per gallon. Fuel economy for heavy trucks averages 6.5 miles per gallon, although this is not regulated by the NHTSA.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the motor vehicles that would travel to and from and within the project site. The regional emissions from the project's mobile sources were estimated using the California Emissions Estimator Model (CalEEMod). The trip generation rates for the project were adjusted in the model based on information obtained from the project's Traffic Impact Analysis (TIA) report (Linscott, Law & Greenspan [LLG] 2018). Table 6-3 presents the forecasted daily trip generation rates from the TIA. No other changes were made to the default mobile-source parameters.

Table 6-3: Project Traffic Generation Forecast

Land Use	Quantity	Units	Weekday Trip Generation Rate (trips/unit/day)	Weekday Trips
Casa Blanca Elementary School	800	Students	1.89	1,512
Source: Linscott, Law & Greenspan (LLG) 2018				

Building Energy Demand

Southern California Edison (SCE) provides electricity to approximately 50,000 square miles of Southern California, including the City of Riverside. SCE obtains electricity from a variety of sources including its own generation plants and purchased power from outside sources. The project can promote building energy efficiency through compliance with energy efficiency standards and the provision of energy efficiency measures that exceed required standards.

All new development would be subject to the latest adopted edition of the Title 24 energy efficiency standards, which are among the most stringent in the United States. As such, the project would not result in the unnecessary, wasteful, or inefficient use of energy.

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SECTION 7: EFFECTS FOUND NOT TO BE SIGNIFICANT

7.1 - Introduction

This section is based on the Notice of Preparation (NOP), dated October 31, 2018, and Initial Study contained in Appendix A of this Draft Focused Environmental Impact Report (Draft Focused EIR). The NOP was prepared to identify the potentially significant effects of the projects and was circulated for public review between October 31, 2018, and November 30, 2018. In the course of this evaluation, certain impacts were found to be less than significant because the project's characteristics would not create such impacts. This section provides a brief description of effects found not to be significant or less than significant, based on the NOP comments or more detailed analysis conducted as part of the Draft Focused EIR preparation process. Note that a number of impacts that are found to be less than significant are addressed in the various Draft Focused EIR topical sections (Sections 3.1 through 3.9) to provide more comprehensive discussion of why impacts are less than significant, and in order to better inform decision makers and the general public.

7.2 - Effects Found not to be Significant

7.2.1 - Aesthetics

Scenic Vistas

There are designated scenic vistas within the City of Riverside located in La Sierra/Norco Hills, Sycamore Canyon Wilderness Park, and Box Springs Park. In addition, the peaks of Box Springs Mountain (approximately 5.56 miles from the project site), Mount Rubidoux (approximately 3.27 miles), Arlington Mountain (approximately 5.43 miles), Alessandro Heights (approximately 1.92 miles), and the La Sierra/Norco Hills (approximately 6.14 miles) provide scenic view points of the City and the region.

The project site is located in a primarily residential area of Riverside that supports a mix of development, including commercial, residential, and institutional land uses. The project site itself does not include any scenic vistas or affect views of any scenic vistas. Impacts would therefore be less than significant.

State Scenic Highways

There are three stretches of highway segments designated as Eligible State Scenic Highways Not Officially Designated in the project vicinity that include Interstate 15 (I-15) from the City of Corona south to the San Diego County line, State Route 91 (SR-91) from its intersection with I-15 west to the Riverside County line, and State Route 71 (SR-71) from SR-91 north to the Riverside County line.

These three Eligible State Scenic Highway segments are all located more than 10 miles from the project site. Furthermore, there are no established scenic resources within the project vicinity. Therefore, no impacts would occur.

Visual Character

The existing visual character of the area surrounding the project site includes commercial, institutional, and residential developments. Construction and operation of Casa Blanca Elementary School would enhance the visual character and quality of the project site by redeveloping a vacant parcel with a use consistent with surrounding uses. The project site would be well maintained with vegetative landscaping to soften the surrounding infrastructure within the Casa Blanca Neighborhood. A landscaped sidewalk would extend in front of the project along Lincoln Avenue, connecting the neighborhood and creating a cohesive community walking feature with access to the project. The project would not have a substantial adverse effect on existing visual character or quality of the site and its surroundings; impacts would be less than significant.

Light and Glare

Existing lighting conditions in the project area include light from building interiors, security and warning lights, and the surrounding land uses, as well as street lighting. The project recreational fields would not have lighting. Adjoining recreational facilities include the baseball field and community center associated with Villegas Park located to the north, northwest, and northeast. These adjoining properties utilize tall recreational lighting to accommodate nighttime baseball games.

Building design materials for the project building have not yet been determined; however, the project would use various non-reflective materials designed to minimize transmission of glare from new structures including window surfaces. These methods would minimize the degree of glare to adjoining land uses, as well as to motorists and pedestrians traveling along Lincoln Avenue.

The project would not introduce significant new sources of light. A specific lighting design has not been determined; however, adequate nighttime lighting would be provided for site safety and security purposes and new sources of lighting would be in keeping with existing lighting patterns in the area. Aside from pole-mounted lighting that may potentially be required in the parking area, additional mounted lighting may also be installed on the three buildings. All new light fixtures would be designed and installed in accordance with lighting regulations contained in the City of Riverside Code of Ordinances, Chapter 19.556, Lighting, to prevent unnecessary light spillage or glare. Therefore, the project would have less than significant impact related to artificial lighting impacts. Consequently, building design would incorporate non-reflective materials, which would not create new sources of glare. As such, impacts related to glare would be less than significant.

7.2.2 - Agriculture and Forestry Resources

Conversion of Farmland

The project site is not designated as Prime, Unique, or Farmland of Statewide Importance. According to the City of Riverside General Plan 2025, Open Space and Conservation Element, the project site is designated as Urban and Built-up Land (City of Riverside 2012, Figure OS-2). An area of Farmland of Local Importance is approximately 0.63 mile east of the site; and Unique Farmland, which encompasses the Arlington Heights Greenbelt, is about 0.18 mile southeast (City of Riverside 2012, Figure OS-2).

These agricultural sites are not within the Casa Blanca Neighborhood and the project does not propose to convert any of these lands to non-agricultural use. Therefore, no impacts would occur.

Zoning for Agricultural Use or Williamson Act

The project site is currently zoned HDR. According to the City of Riverside General Plan 2025 Open Space and Conservation Element, no land within the Casa Blanca Neighborhood is zoned for agricultural use or under a Williamson Act contract (City of Riverside 2012, Figure OS-3). Since the project site is not zoned for agricultural use or under a Williamson Act contract, no impacts would occur.

Re-Zoning, Loss, or Conversion of Forest Land

The project site is located on Urban and Built-up land and is currently zoned HDR. In addition, there are no forests or timberland within the Casa Blanca Neighborhood. The project site and surrounding areas do not support a riparian forest or woodland/forest vegetation, as shown in City of Riverside General Plan 2025 Open Space and Conservation Element (City of Riverside 2012, Figure OS-5). According to the United States Forest Service National Forest Locator Map, the nearest National Forest to the site is the Cleveland National Forest, located within the Santa Ana Mountains approximately 13 miles southwest of the project site. As such, the project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impacts would occur.

Changes in the Existing Environment

No forestland or timberland occurs on the project site or within the project area. No impacts would occur.

7.2.3 - Air Quality

Consistency with Air Quality Management Plan

The project would not exceed the growth assumptions in the Air Quality Management Plan (AQMP). The project would not result in a regional or localized exceedance of criteria air pollutants and would comply with all applicable South Coast Air Quality Management District (SCAQMD) rules and regulations. Consequently, the project would not conflict with or obstruct implementation of the applicable air quality plans, and, therefore, the impact would be less than significant.

Potential for Air Quality Standard Violation

The project's maximum daily construction and maximum daily operational emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the short-term construction and long-term daily operational emissions would not violate or contribute substantially to an existing or project air quality violation. Impacts would be less than significant.

Cumulative Impacts.

The project's maximum daily construction and maximum daily operational emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the project's construction and

operational emissions would not result in a cumulatively considerable increase in emissions. As such, the cumulative construction and long-term impacts of the project would be less than significant.

Odors

Diesel exhaust would be emitted during future construction activities (from the heavy-duty equipment). Volatile organic compounds (VOCs) would also be emitted during construction of the project from painting and asphalt paving. These odors are objectionable to some; however, the odors would disperse rapidly from the project area and therefore should not be at a level to induce a negative response. However, no odors would result from the project during operations. Impacts would therefore be less than significant.

7.2.4 - Biological Resources

Riparian Habitat or Other Sensitive Natural Community

The project site is located in a primarily urban area surrounded by a mix of residential, commercial, and institutional development. The City of Riverside General Plan 2025 Open Space and Conservation Element does not designate the project site as a riparian habitat. Furthermore, the project area contains vacant land indicating disturbance through past fill efforts. No riparian or sensitive habitats occur on the project site; therefore, the proposed project would not result in substantial adverse impacts on riparian habitat or other sensitive natural communities. No impacts would occur.

Federally Protected Wetlands

The project area is not located on federally protected wetlands, the project site is designated as Residential/Urban/Exotic. According to the City of Riverside General Plan 2025 Open Space and Conservation Element, vernal pools in the City of Riverside exist in the Lake Matthews Ecological Preserve (approximately 6.35 miles away from the project site), as well as adjacent to the Santa Ana River between Main Street and Bandini Avenue (approximately 4 miles away). Marsh communities in the City are located along the shores of Lake Matthews (approximately 5.82 miles away). A Cismontane alkali marsh is also known to occur east of Lake Mathews near Cajalco Road and between Cajalco Road and Rider Street (approximately 9.36 miles away). Coastal scrub is found on the steep slopes in the southern hillsides (approximately 5.62 miles away), as well as at Sycamore Canyon, Alessandro Hills, Box Springs Mountain, Arlington Heights, Woodcrest, Rancho El Sobrante, and rocky outcroppings in the La Sierra Lands and the La Sierra/Norco Hills (City of Riverside 2012). The project site does not contain jurisdictional drainages, wetlands, riparian vegetation, or evidence of an ordinary high water mark. Subsequently, no United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or California Department of Fish and Wildlife (CDFW) jurisdictional areas are located on-site. No wetlands occur on the project site; therefore, the project would not have direct or indirect impacts on federally protected wetlands as defined by Section 404 of the Clean Water Act. No impacts would occur.

Native Resident or Migratory Fish or Wildlife Species

The project site is undeveloped and located in a primarily urban area surrounded by a mix of residential, commercial, and institutional development. The urban context of the project site coupled with the dense surrounding development precludes significant wildlife movement corridors. Because of this, impacts would be less than significant.

Local Policies or Ordinances Regarding Trees

There are several ornamental trees throughout the project site along the periphery of the project site and within vacant parcel. None of the trees on-site are protected under the County of Riverside tree ordinance. A few ornamental trees are scattered about the project site, and the implementation of the project would require removal. However, the City of Riverside has not implemented a native tree or native shrub protective ordinance. Relative to the significance criterion, the project would not conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance. Impacts would be less than significant.

7.2.5 - Cultural and Tribal Cultural Resources

Historic Resources

Existing structures associated with the former radio station have been removed from the site, and new structures are proposed to be added.

The project site is located within a primarily residential area of Riverside on the northern side of Lincoln Avenue and Sonora Place. According to the City of Riverside General Plan 2025 Land Use and Urban Design Element, the project site is not located within a historic district or a potential historic district.

Research of historical aerial photographs from 1948 and 1952 indicated that the project site was used for agricultural purposes.

The likelihood of encountering undiscovered historic resources over the course of project construction is low. While unlikely, development activities always have the potential to encounter undiscovered archaeological resources. Therefore, the impacts to historical resources are less than significant.

7.2.6 - Geology and Soils

Earthquake Fault

Ground rupture is most likely to occur along active faults and typically occurs during earthquakes of magnitude 5.0 or higher. Ground rupture only affects the area immediately adjacent to a fault. Southern California is known for having seismically active regions that may be susceptible to seismic activity at any point in time. The nearest fault zone is the San Jacinto Fault Zone, which is approximately 11 miles northeast of the site. Because of the project site's distance to the Earthquake Fault Zone, the potential for surface fault rupture or secondary rupture along a pressure ridge within the site is unlikely.

The project site is not within an established Alquist-Priolo Earthquake Fault Zone for surface fault rupture hazards, and no active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site (City of Riverside 2018). Therefore, the impacts would be less than significant.

Seismic Ground Shaking

There are no known active, potentially active, or inactive faults within the City of Riverside. However, several faults in the region have the potential to produce seismic impact. The three faults that pass within 20 miles of the City of Riverside include: The San Andreas Fault (approximately 26 miles from the project site), the San Jacinto Fault (approximately 11 miles from the project site), and the Elsinore Fault (approximately 13 miles from the project site). These faults have the capability to produce up to an 8.3 magnitude earthquake, 7.0 magnitude, and 7.2 magnitude, respectively. Although no Alquist-Priolo fault zone or active or potentially active fault has been mapped at the surface within Riverside, one northwest southeast trending unnamed fault identified as County Fault (approximately 10.5 miles from the project site) is projected toward the southwest corner of the sphere of influence boundary south of Lake Mathews (City of Riverside 2018, See Figure PS-1).

Due to of the proximity of these above-mentioned faults, the project site could be subjected to strong seismic ground shaking in the event of an earthquake. The project would involve all new structures, and would be required to conform to the seismic design parameters of the California Building Code with review and approval of plans by the City of Riverside Building and Safety Division of the City's Community Development Department for applicable regulations and engineering practices. Compliance with these regulations would ensure that impacts from a strong seismic ground-shaking event would be less than significant.

Seismic-Related Ground Failure, Including Liquefaction

According to the City of Riverside General Plan 2025, Public Safety Element, the project site is not susceptible to liquefaction and risks are identified as low. The project would construct new structures and would conform to the seismic design parameters of the California Building Code with review and approval of plans by the Riverside Building and Safety Division for applicable regulations and engineering practices. Compliance with these regulations would ensure that impacts related to seismic-related ground failure, liquefaction would be less than significant.

Landslides

According to the Department of Conservation Regulatory Mapping System, the project site is not located within a Landslide and Liquefaction Hazard Zone (CDC 2018). However, the project site is located in a generally flat area of the City and is approximately 5 miles from reported known landslide areas. Due to the relatively flat terrain and compliance with existing grading and building code regulations, impacts associated with landslides would be less than significant.

Soil Erosion or Loss of Topsoil

Implementation of the project would require ground-disturbing activities, such as grading, that could potentially result in soil erosion or loss of topsoil. The project would entail the construction and

operation of a new K-6 Elementary school campus that would have the capacity to serve up to 800 students. The highest potential for erosion impacts would occur during the proposed project's grading and excavation phases. During construction, there is potential for temporary erosion to occur. To reduce the erosion related impacts, the proposed project would be required to comply with Best Management Practices (BMPs) and all federal, State, and local regulations for erosion control.

The project's grading plan would be designed by a registered civil engineer to ensure that the proposed earthwork and stormwater structures are designed to avoid soil erosion. Construction of the project would be required to comply with the Construction General Permit, through preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). BMPs included in the SWPPP would minimize soil erosion during construction. The project would also be required to comply with the City's Municipal Code Titles 17 (Grading) and 18 (Subdivisions), which includes erosion control standards and measures to minimize soil erosion (City of Riverside 2018). Compliance with the aforementioned regulations would ensure that project-related erosion impacts would be less than significant. As such, impacts would be less than significant.

Geologic Unit or Unstable Soil

The project's engineering and construction would comply with the California Building Code and the City's Municipal Code Titles 17 (Grading) such that lateral spreading, subsidence, liquefaction or collapse would not be a concern (City of Riverside 2018). Thus, impacts would be less than significant.

Expansive Soil

According to the United States Department of Agriculture Natural Resource Conservation Service, two primary underlying soils occur on the site: Arlington loam (ArB) with zero to 2 percent slope and Buren fine sandy loam (BuC2) with 2 to 8 percent slope (USDA, 2018). Both soils are considered moderately to well-drained soils and have low to moderate potential for soil expansion. Compliance with applicable provisions of the City's Subdivision Code Title 18 and the California Building Code would ensure that project impacts related to expansive soils are less than significant.

Soil Incapable of Supporting Septic Tanks

The project would be connected to the City's existing sewer system. The project does not propose the use of septic tanks. No impacts would occur.

7.2.7 - Hazards and Hazardous Materials

Hazards through Transport, Use or Disposal

A school facility does not typically store large amounts of hazardous materials on-site. Retail-size quantities needed for maintenance, including those for landscaping, would be stored on-site. The Riverside Unified School District (RUSD) outsources custodial services for the schools after hours utilizing general cleaning supplies that are not stored on campus.

During the construction phase of the project, limited amounts of hazardous materials would be used, including standard construction materials (e.g., paints and solvents) and petroleum based products (e.g., vehicle fuel and degreasers). Compliance with all federal, State, and local standards

and regulations would ensure that project impacts related to the routine transport, use, and disposal of hazardous materials would be less than significant.

Release of Hazardous Materials into the Environment

As mentioned above in Impact 8(a), the project would involve a limited amount of hazardous materials during the short-term construction phase as well as long-term operational phase. Compliance with all federal, State, and local standards and regulations would be required and impacts would be less than significant.

Hazardous Emissions or Waste near Schools

There are no existing operational schools identified within 0.25 mile of the site. The Riverside Montessori Academy is the closest school, located at 7141 Indiana Avenue approximately 0.45 mile north. Existing structures as part of the radio station that were previously on-site since the early 1960s have been demolished. There is a potential that asbestos-containing materials and lead-based paints were present within the previous on-site building. It is unknown whether the current owner had performed testing for such materials prior to demolition. Therefore, to prevent a significant hazard to the surrounding community from the release of acutely hazardous materials, the project would be required to comply with all federal, State, and local standards and regulations related to hazardous material transport, storage, and disposal. Impacts would be less than significant.

Compiled Hazardous Materials Creating Significant Hazard

Government database research found no occurrences of violations on the project site. The project site is listed on the Digital Obstacle, recorded with the latitude/longitude as having an approximately 125-foot-tall structure. The Federal Aviation Administration Digital Obstacle file describes all known obstacles of interest to aviation users in the United States. The former towers listed as obstacles on the database have since been demolished.

The database indicated that there are no registered aboveground storage tanks or underground storage tanks within 0.25 mile of the project site. Review of the California and Riverside County Leaking Underground Storage Tank (LUST) Lists identified three sites listed on the LUST database within the 0.5-mile search radius of the project site.

All the off-site listings have a low potential to impact the project site based on the following criteria: (1) no reported impacts to groundwater, (2) closure approval received from the lead regulatory agency, (3) relative distance from the project site, and/or (4) identified as being cross-gradient or down gradient with respect to the local groundwater flow direction relative to the project site. Therefore, impacts would be less than significant.

Airport

The nearest airport is the Riverside Municipal Airport located approximately 2.71 miles northwest of the project site. According to the Riverside Airport Masterplan (2009), the project site is not located within its planning area (City of Riverside 2009). March Air Reserve Base (MARB) is a 2,400-acre air base located approximately 6.5 miles southeast of the project. According to Figure PS-6B with the

Public Safety Element of the City of Riverside General Plan 2025 and MARB/Inland Port Airport Land Use Compatibility Plan[1], the project appears to be on the edge but outside of airport influence boundary and within Federal Air Regulations (FAR) Part 77 Notification Area. Therefore, no impacts would occur.

Private Airstrip

The project site is located in a primarily residential/commercial area of the City of Riverside. The project site is not located within the vicinity of a private airstrip. Implementation of the project would not result in an airstrip-related safety hazard for people residing or working at the project. No impacts would occur.

Interfere with Emergency Response Plan

The project does not involve the development of structures or the redevelopment of any streets that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project also does not include any characteristics that would physically impair or interfere with emergency response or evacuation in the project vicinity. The project would be required to follow current RUSD emergency evacuation procedures in the event of an emergency event. Thus, impacts would be less than significant.

Exposure to Wildland Fires

The project site is located in primarily residential/commercial area within the City of Riverside. The nearest fire station to the project site is City of Riverside Fire Station No. 10, located 0.86 mile southwest of the site at 2590 Jefferson Street. The project site would receive adequate service in the event of a fire. The project is not located in a Very High Fire Safety Zone. Impacts would be less than significant.

7.2.8 - Hydrology and Water Quality

Surface and Groundwater Quality

The project would implement stormwater best management practices and comply with Santa Ana RWQCB requirements for Priority Development Projects. For storm events exceeding the 2-year storm event, overflow can discharge onto Lincoln Avenue and travel into existing County catch basins and into the Riverside County Flood Control and Water Conservation District Monroe Storm Drain Railroad Lateral. This storm drain should have the capacity for a 100-year storm event. Final hydromodification assessment will be conducted prior to design development. Impacts to hydrology are site specific and not cumulative in nature and impacts would be less than significant.

Groundwater Supply or Recharge

Construction and operation do not anticipate using existing groundwater. Therefore, the project would not substantially decrease groundwater supplies. The proposed project is required to comply

[1] http://www.rcaluc.org/Portals/0/17%20-%20Vol.%201%20March%20Air%20Reserve%20Base%20Final.pdf?ver=2016-08-15-145812-700

with all existing regulations to prevent contamination and must meet regulatory water quality standards. Impacts would be less than significant.

Drainage Leading to Erosion or Siltation, Flooding, Additional Sources of Polluted Runoff, or Impedance of Flood Flows

Proposed elevation differences, grading and slopes will conform to local erosion and sediment control and design standards to protect, stabilize, and prevent sediment. The project would not substantially alter the existing drainage pattern of the site or area resulting in substantial erosion or siltation on-or off-site. Impacts would be less than significant.

The project will be subject to the Construction General Permit to comply with existing water quality standards and waste discharge requirements during all grading and construction activities. A SWPPP shall be prepared and include BMPs to reduce pollutants discharged from the project site to the maximum extent practicable.

Long-term Impacts

A WQMP is required by the City of Riverside to minimize potential pollutants during the operational phase. The project shall incorporate where applicable, stormwater BMPs into the project design in the following progression: Low Impact Development BMPs and Source Control BMPs. With the implementation of BMPs, impacts related to stormwater drainage systems and polluted runoff would be less than significant.

Risk of Pollutant Release Due to Inundation

According to the Federal Emergency Management Agency (FEMA), FIRM Flood Insurance Map No. 06065C0720G, the project is not located within a 100-year flood hazard area. The project is determined to be within Zone X, which are areas outside the 0.2% annual chance floodplain.

The project is located approximately 40 miles inland from the Pacific Ocean and is not located near to any large bodies of water. Furthermore, the site and adjacent area is in an urbanized area with relatively flat topography. Therefore, the project will not be affected by tsunamis, seiches, or mudflows. No impact would occur.

Water Quality of Sustainable Groundwater Management Plans Consistency

The proposed project would comply with state, federal, and local requirements related to water quality and sustainable groundwater management. As such, impacts would be less than significant.

7.2.9 - Land Use and Planning

Division of an Established Community

The physical division of an established community typically refers to the construction of a linear feature, such as an Interstate highway or railroad tracks, or removal of a means of access, such as a local bridge that would affect mobility within an existing community or between a community and outlying area. The project does not involve such features, and would not hinder access or affect mobility. Therefore, less than significant impact would occur.

Land Use Plans

The project is located in an R-3-1500 zone and designated by the City of Riverside General Plan 2025 as a HDR land use area. A tentative tract map for the construction of 210 dwelling units on the project site was approved by the City of Riverside Planning Commission on August 23, 2018. In order to construct a public school in this zone, RUSD is required to apply for a General Plan Amendment (GPA) and Rezone to a Public Facilities use, unless the RUSD Board votes to overrule this requirement as stated in Government Code Section 53094. The RUSD Board of Education has the discretion and legal authority to find the City of Riverside's zoning inapplicable and develop an elementary school on the project site. Thus, the project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

7.2.10 - Mineral Resources

Loss of Known Mineral Resource of Value

The project does not involve extraction of mineral resources. The project site is located within a predominately single-family residential area of Riverside, the project site is not classified as a mineral resource site. No impacts would occur.

Loss of Mineral Resource Recovery Site

The project site is not within a known mineral resource site and implementation of the project would not result in a loss of availability of a locally important mineral resource recovery site. Thus, no impacts would occur.

7.2.11 - Noise

Exposure to Excessive Ground borne Vibration or Noise Levels

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. The City of Riverside has not adopted criteria for groundborne vibration impacts. The project could potentially result in excessive groundborne vibration and noise during the constructional phase, but will cease once construction is complete. Impacts would be less than significant.

Aviation Noise

The nearest airport to the project site is the Riverside Municipal Airport and is located 2.7 miles northwest of the project site. Due to its distance from the airports runways, the project site is located outside of the airport's 55 A-weighted decibel (dBA) community noise equivalent level (CNEL) noise contours. Therefore, impacts associated with public airport noise would be less than significant.

Airstrip

No private airstrips are located within 2 miles of the project site. Therefore, due to the distance of the project location from any private airstrips, the project would not expose persons residing,

working, or visiting the project site to excessive noise levels associated with private airstrip noise. No impacts associated with private airstrip noise would occur.

7.2.12 - Population and Housing

Substantial Population Growth

The project would not induce substantial growth in the area directly or indirectly. Approximately 30 to 40 employees are anticipated to be employed by the project, and these employees would be a mix of new hires and transfers from within the RUSD. There would not be any new construction of homes or businesses, nor would an extension of roads and other infrastructure be provided. In addition, students attending Casa Blanca Elementary School would be transfers from existing elementary schools (Harrison, Jefferson, Washington, Monroe, Victoria, and Madison). Impacts to population growth are less than significant.

Displacement of Substantial Numbers of Existing Housing

The project site does not currently contain any housing and does not propose future housing. Therefore, the impacts to existing housing are less than significant.

Displacement of Substantial Number of People

The project site previously contained a radio building, and does not propose the construction of any new housing. The project would not displace people, necessitating the construction of replacement housing elsewhere. Therefore, no impacts would occur.

7.2.13 - Public Services

Fire Protection

Fire protection services are provided by the Riverside Fire Department (RFD). There are fourteen fire stations located throughout the City of Riverside. The closest station to the project site is Fire Station No. 10 located at 2590 Jefferson Street, about 0.85 mile from the project site. According to personal communication with Fire Marshal Jennifer McDowell, average response times for RFD are about 7.8 minutes. Based on current response times and locations of fire stations in proximity to the project site, there are no concerns related to response times or the need for new facilities to serve the project area. Impacts would be less than significant.

Police Protection

Police protection is provided by the Riverside Police Department (RPD). The project site is within the area of the central neighborhood policing center. Lincoln Station, located at 8181 Lincoln Avenue is the closest station to the site, about 1.1 miles away. According to the City of Riverside General Plan 2025, the RPD strives to provide minimum response times of 7 minutes for all Priority 1 calls and 12 minutes for Priority 2 calls. Construction of Casa Blanca Elementary School would not add an additional burden to the School Resource Officer(s) (SRO) assigned to service the school because the project would serve existing students already attending other RUSD schools. The project would not

require the construction of new RPD facilities or the expansion of existing facilities due to the proximity of the Lincoln Avenue station. Impacts would be less than significant.

Schools

According to the RUSD Neighborhood Schools Study, currently 807 students reside within the Casa Blanca Neighborhood and attend six different elementary schools (Harrison, Jefferson, Washington, Monroe, Victoria, and Madison). Out of the 807 students, there are 453 students that are bused to four feeder elementary schools (Harrison, Jefferson, Monroe, and Victoria) outside of the Casa Blanca Neighborhood (RUSD 2017). The project will accommodate students within the neighborhood. Due to the reduction in impacts to the existing schools, there would not be an increase in the student population and therefore impacts would be less than significant.

Parks

The project is surrounded by an existing park (Villegas Park), Washington Park (approximately 0.63 mile away), and other recreational uses. Students attending Casa Blanca Elementary School would utilize the proposed recreational facilities available on campus. The project would not increase population in the area and thus would not increase the use of existing neighborhood and regional parks or other recreational facilities. In addition, due to recent renovation to Villegas Park behind the project site, there would not be significant impacts related to parks. Impacts would be less than significant.

Other Public Facilities

The project proposes the construct ion of a K-6 Elementary school within the Casa Blanca Neighborhood that would include a new library. According to communication with Riverside Public Library Director, Erin Christmas, there would be no need for additional facilities to accommodate the project. The project would have less than significant impacts on the public facilities in the Casa Blanca Neighborhood. The closest Community Center to the project site is Ysmael Villegas Community Center, which was recently renovated in July of 2015. Due to this recent renovation and proximity to the project site, impacts on other public facilities would be less than significant.

7.2.14 - Recreation

Increase Use of Recreational Facilities

The project does not propose an increase in population alteration of existing park facilities; new recreational facilities would be constructed on campus for those attending school. The project would have no impact on existing recreational facilities or parks in the area.

Expansion of Recreational Facilities

As mentioned above, students would utilize on-campus recreational facilities while at school, which would not require expansion of current facilities. Impacts would be less than significant.

7.2.15 - Transportation and Traffic

Air Traffic Patterns

The nearest airport is the Riverside Municipal Airport located approximately 2.71 miles northwest of the project site. According to the Riverside Airport Masterplan (2009), the project site is not located within its planning area (City of Riverside 2009). MARB is a 2,400-acre air base located approximately 6.5 miles southeast of the project. According to Figure PS-6B with the Public Safety Element of the City of Riverside General Plan 2025 and MARB/Inland Port Airport Land Use Compatibility Plan, the project appears to be outside of airport influence boundary. There would be no associated impacts.

Hazardous Design Features

The project would not substantially increase hazards due to the design features or incompatible uses. RUSD plans are required to be reviewed and approved by the Division of the State Architect. Impacts would be less than significant.

7.2.16 - Utilities and Service Systems

Wastewater Treatment

As mentioned in the General Plan Public Facilities and Infrastructure Element, the 2005 capacity for the Riverside Regional Water Quality Treatment Plant was 40 mgd, which is not anticipated to be reached before 2025. A planned expansion will allow the facility ultimately to treat 52.2 million gallons of wastewater per day. The Treatment Plant provides full tertiary treatment for all flows (City of Riverside 2018). Therefore, the redistribution of students to be enrolled at the Casa Blanca Elementary School, given the existing infrastructure in place and the planned capacity for service, will have less than potentially significant impact.

Construction of New Facilities

The project would be served by Riverside Public Utilities (RPU), which obtains its water supply from groundwater stored in the Bunker Hill, Riverside North, and Riverside South groundwater basins. Based on the City of Riverside 2015 Urban Water Management Plan (UWMP), RPU calculated a baseline water use in the 2010 UWMP at 264 gallons per capita per day (gpcd) for the period from 1999 through 2008. Based on those figures, RPU calculated a compliance water use target of 211 gallons per capita per day (GPCD) for 2020, and an interim water use target of 238 GPCD for 2015. RUSD estimates a capacity of 800 students on the project site as result of the project. Using the projected student number, water demand for the project would be approximately 168,800 GPCD, using the 2020 target GPCD, or approximately 189 acre-feet/year (AFY). Under normal conditions, the 2015 UWMP predicts a total Citywide water demand of 95,221 AFY in 2020 and 96,534 AFY in 2025 (City of Riverside 2016). Due to the existing infrastructure in place and the planned capacity for service, the project will have less than significant impact.

Construction of New Stormwater Drainage Facilities

The City of Riverside currently has sewage facilities available to serve the project and the site. Furthermore, projects that comply with NPDES requirements would not result in a significant impact

related to changes in the quantity, rate, or quality of stormwater runoff from the project site. The project would not require or result in the construction of new stormwater drainage facilities or the expansion of existing facilities, and impacts would be less than significant.

Water Supply

RPU is the municipally-owned utility that provides potable, non-potable, and recycled water to retail customers primarily within the City of Riverside. As mentioned previously, a majority of the RPU's water is extracted groundwater from five groundwater basins. RPU has a total of 201 wells, of which 50 are potable wells; 14 are non-potable wells; 85 are monitoring wells; and 50 are not active. Additionally, RPU has the ability to purchase water from the California State Water Project from the Western Municipal Water District (WMWD) through a connection at the Metropolitan Water District of Southern California (Metropolitan) Henry J. Mills Water Treatment Plant (WTP). Up to 30 cubic feet per second (cfs) or 19.4 mgd of imported water can be purchased from Metropolitan through an existing agreement and conveyed through existing infrastructure.

The City's current and future water needs and projections are based on Geographic Information System (GIS) data from the California Department of Water Resources and the Southern California Association of Governments (SCAG), which develops regional forecasts of future population. The RPU service area is approximately 80 percent built out and contains about 15 percent vacant land available for development. RPU has identified three categories of growth for ultimate build out: (1) development within the remaining vacant land, (2) increased density within areas already developed as defined in the City of Riverside General Plan 2025, and (3) water demand associated with growth and expansion at the University of California Riverside and California Baptist University. Therefore, the City's current and future water demands outlined in the 2015 UWMP took into consideration future development of the project site with residential uses and its associated population increase (City of Riverside 2016).

Thus, despite the ongoing drought conditions in Southern California, RPU's conservation efforts and long-range planning have created a situation where RPU's identified supplies exceed the expected demands through 2040. As such, impacts on water supplies as a result of the project would be less than significant.

Capacity to Serve

As discussed above, the project would be served by the City of Riverside Public Works Department, which has adequate treatment capacity to serve the project's effluent. Impacts would be less than significant.

Solid Waste Capacity

As mentioned above, the Riverside Public Works Department collects trash from 70 percent of all households. The remaining portion of the City is collected by a private contractor. The project site is located within the Riverside Public Works Department service area. All solid waste collected is tipped at the Robert A. Nelson Transfer Station, which is owned by the County of Riverside. The waste is then transferred to either the Badlands Landfill in Moreno Valley, the El Sobrante Landfill located

east of I-15 south of the City of Corona, or the Lamb Canyon Landfill located between the City of Beaumont and the City of San Jacinto for disposal (City of Riverside 2012). While solid waste may increase on site, the El Sobrante Landfill has a remaining capacity of 145,530,000 tons in-county (184,930,000 tons total), with estimated capacity to be reached in 2045 (CalRecycle 2018). The Badlands Landfill has an overall remaining disposal capacity of approximately 15,748,799 cubic yards, with the expected capacity to be reached in 2022 (CalRecycle 2018). The Lamb Canyon Landfill has a remaining disposal capacity of 19,242,950 cubic yards, which is estimated to be reached in 2029 (CalRecycle 2018).

The increase in solid waste generated by the development under the City of Riverside General Plan 2025 is not anticipated to exceed capacity of the landfills. Therefore, the project is consistent with the growth assumptions in the City of Riverside General Plan 2025 and the impacts to the landfill capacity to accommodate the project's projected waste disposal needs is therefore less than significant.

Solid Waste Federal, State, and Local Statutes and Regulations

All collection, transportation, and disposal of any solid waste generated by the project would comply with all applicable federal, State, and local statutes and regulations. Therefore, there would be no associated impacts.

The project would utilize the existing solid waste services for the surrounding area of the project site. Furthermore, consistent with provisions stated in the 2013 CalGreen Building Code, any hazardous materials collected on the project site during either construction or operation of the project would be transported and disposed of by a permitted and licensed hazardous materials service provider at a facility permitted to accept such hazardous materials. Therefore, impacts associated with solid waste statutes and regulations would be less than significant.

SECTION 8: PERSONS AND ORGANIZATIONS CONSULTED/LIST OF PREPARERS

8.1 - Persons and Organizations Consulted

8.1.1 - Lead Agency

Riverside Unified School District

Facilities, Planning, and Development Department

Director, Facilities, Planning, and Development ..... Ana Gonzalez
Assistant Director ..... Daniel Rodriguez

8.1.2 - Public Agencies

Local Agencies

Fire Department

Fire Chief, Riverside Fire Department ..... Michael Moore
Fire Marshal, Riverside Fire Prevention Bureau ..... Jennifer McDowell

Police Department

Chief of Police, Riverside Police Department ..... Sergio Diaz
Sergeant, Riverside Police Department ..... Jayson Wood

Public Library

Director, Riverside Public Library ..... Erin Christmas

Parks, Recreation, and Community Development

Riverside Parks, Recreation, and Community Service Planning ..... Randy McDaniel
Riverside Parks, Recreation, and Community Service Planning ..... Adolfo Cruz

8.2 - List of Preparers

8.2.1 - Lead Agency

Riverside Unified School District

Director, Facilities, Planning, and Development ..... Ana Gonzalez
Assistant Director ..... Daniel Rodriguez

8.2.2 - Lead Consultant

FirstCarbon Solutions

Senior Project Director ..... Kerri Tuttle
Project Director ..... Frank Coyle

Senior Project Manager ..... Charles Holcombe
Project Manager..... Angela Wolfe
Senior Air Quality Scientist..... Jason Paukovits
Senior Archaeologist ..... David Smith
Senior Noise Scientist..... Phil Ault
Senior Biologist ..... Brian Mayerle
Assistant Project Manager ..... Robert Carroll
Analyst..... Kimber Johnson
Analyst..... Victoria Chung
Analyst..... Brittany Hagen
Technical Editor ..... Susie Harris
Word Processor ..... Ericka Rodriguez
GIS/Graphics ..... Karlee McCracken
Reprographics ..... Octavio Perez

8.2.3 - Technical Subconsultants

Linscott, Law & Greenspan, Engineers

P.E. Senior Transportation Engineer ..... Daniel Kloos
Transportation Engineer I..... Jeremy Mempin

KPFF Engineering

P.E. Project Engineer ..... Thinh Luc
P.E. Project Engineer ..... Aneta McHenry

8.2.4 - Legal Counsel

FirstCarbon Solutions

Legal Counsel ..... Megan Starr

SECTION 9: REFERENCES

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