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LA SIERRA HIGH SCHOOL TRACK AND FIELD PROJECT

for Alvord Unified School District

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ABBREVIATIONS AND ACRONYMS

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
amsl	above mean sea level
AQMP	air quality management plan
AST	aboveground storage tank
BAU	business as usual
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program

CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
НСМ	Highway Capacity Manual
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
IPCC	Intergovernmental Panel on Climate Change
L _{dn}	day-night noise level
L _{eq}	equivalent continuous noise level
LBP	lead-based paint
LCFS	low-carbon fuel standard
LOS	level of service
LST	localized significance thresholds
M_{W}	moment magnitude
MCL	maximum contaminant level
MEP	maximum extent practicable

mgd	million gallons per day
MMT	million metric tons
MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO _X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O ₃	ozone
OES	California Office of Emergency Services
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin
SO _X	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

TAC	toxic air contaminants			
TNM	transportation noise model			
tpd	tons per day			
TRI	toxic release inventory			
ТТСР	traditional tribal cultural places			
USFWS	United States Fish and Wildlife Service			
USGS	United States Geological Survey			
UST	underground storage tank			
UWMP	urban water management plan			
V/C	volume-to-capacity ratio			
VdB	velocity decibels			
VHFHSZ	very high fire hazard severity zone			
VMT	vehicle miles traveled			
VOC	volatile organic compound			
WQMP	water quality management plan			
WSA	water supply assessment			

1.1 INTRODUCTION

This draft environmental impact report (DEIR) addresses the environmental effects associated with the implementation of the proposed La Sierra High School Track and Field project (proposed project). The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers.

This DEIR has been prepared pursuant to the requirements of CEQA and the Alvord Unified School District's CEQA procedures. The Alvord Unified School District (District), as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on District technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR is derived from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments (aesthetics, air quality, cultural resources, energy, greenhouse gas, noise, transportation and traffic, and tribal cultural resources).

1.2 ENVIRONMENTAL PROCEDURES

This DEIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals. CEQA established six main objectives for an EIR:

- 1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
- 2. Identify ways to avoid or reduce environmental damage.
- 3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- 4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
- 5. Foster interagency coordination in the review of projects.
- 6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

1.2.1 EIR Format

Chapter 1. Executive Summary: Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the project.

Chapter 2. Introduction: Describes the purpose of this EIR, background on the project, the notice of preparation, the use of incorporation by reference, and Final EIR certification.

Chapter 3. Project Description: A detailed description of the project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this EIR.

Chapter 4. Environmental Setting: A description of the physical environmental conditions in the vicinity of the project as they existed at the time the notice of preparation was published, from local and regional perspectives. These provide the baseline physical conditions from which the lead agency determines the significance of the project's environmental impacts.

Chapter 5. Environmental Analysis: Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed development in the area.

Chapter 6. Significant Unavoidable Adverse Impacts: Describes the significant unavoidable adverse impacts of the proposed project.

Chapter 7. Alternatives to the Proposed Project: Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project Alternative and a Reduced Intensity Alternative.

Chapter 8. Impacts Found Not to Be Significant: Briefly describes the potential impacts of the project that were determined not to be significant by the Initial Study and were therefore not discussed in detail in this EIR.

Chapter 9. Significant Irreversible Changes Due to the Proposed Project: Describes the significant irreversible environmental changes associated with the project.

Chapter 10. Growth-Inducing Impacts of the Project: Describes the ways in which the proposed project would cause increases in employment or population that could result in new physical or environmental impacts.

Chapter 11. Qualifications of Persons Preparing EIR: Lists the people who prepared this EIR for the proposed project.

Appendices: The appendices for this document comprise these supporting documents:

- Appendix 2-1: NOP and NOP Comment Letters
- Appendix 2-2: Statement on Per- and Polyfluoroalkyl Substances (PFAS)
- Appendix 5.2-1: Air Quality and Greenhouse Gas Modeling Data
- Appendix 5.6-1: Noise Modeling
- Appendix 5.7-1: Transportation Impact Assessment

1.2.2 Type and Purpose of This DEIR

This DEIR has been prepared as a "Project EIR," defined by Section 15161 of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a specific development project and should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation.

1.3 **PROJECT LOCATION**

La Sierra High School (La Sierra HS) is at 4145 La Sierra Avenue (Assessor's Parcel Numbers [APNs] 142130002 and 142140001) in the La Sierra neighborhood of the City of Riverside. The proposed project would be developed within 10.52 acres of the northern portion of La Sierra HS (project site). Riverside is bordered by the city of Jurupa Valley to the north, the city of Moreno Valley and unincorporated Riverside County to the east, unincorporated Riverside County to the south, and the city of Norco and unincorporated Riverside County to the west. Regional access to the campus is provided by Interstate 5 (I-5), 4.45 miles west, and State Route 91 (SR-91), approximately 0.60 mile south. La Sierra HS is bounded by residential uses, Collett Avenue, and Collett Elementary School to the north; and residential uses to the south, east, and west (Figure 3-3, *Aerial Photograph*).

1.4 PROJECT SUMMARY

The Alvord Unified School District (AUSD or District) is proposing to renovate its sports facilities in two phases (see Figure 3-4, *Conceptual Site Plan*). The proposed project would not impact student or staff capacity at La Sierra HS.

- Phase 1
 - Renovate the existing track and field.
 - Add field lighting, public address (PA) system, scoreboard, and bleachers to accommodate 1,200 spectators.
- Phase 2¹
 - Add bleachers for an additional 1,600 spectators—total capacity for 2,800 spectators.
 - Construct a 5,500-square-foot field house that would include restrooms, ticket office, storage, concessions stand, and team room.
 - Repave and restripe the 134,000-square-foot parking lot.
 - Relocate the existing tennis courts (59,677 square feet) by approximately 10 feet to the south.
 - Construct new access from the main parking lot in the northwestern portion of the site to the bleachers.
 - Reduce the number of parking spaces by 136 parking stalls.

This DEIR analyzes the scope of both phases of the proposed project. However, until funding for Phase 2 is available, the District will only move forward with the construction of Phase 1.

1.5 SUMMARY OF PROJECT ALTERNATIVES

The CEQA Guidelines (Section 15126.6[a]) state that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." The alternatives in this DEIR were based, in part, on their potential to reduce or eliminate the impacts determined to be potentially significant for implementation of the proposed Project (see Table ES-1, *Summary of Environmental Impacts, Mitigation, and Levels of Significance After Mitigation*). Project alternatives are assessed in further detail in Chapter 7, *Alternatives to the Proposed Project*.

1.6 NO PROJECT ALTERNATIVE

CEQA Guidelines § 15126.6(e) requires that a "No Project" Alternative be evaluated. This analysis must discuss the existing site conditions as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved. Under the No Project Alternative, the project site would not be developed with the proposed improvements, and the existing facilities would remain. Use of the existing

¹ While this DEIR analyzes both phases of the proposed project, the proposed scope under Phase 2 is contingent on funding availability. At this time, the District will be moving forward with Phase 1 of the proposed project.

facilities, as they are currently, would also remain the same with some sporting games and events occurring onsite and others occurring at other schools within the District.

The No Project Alternative would eliminate impacts to all the environmental topics analyzed in the DEIR, except transportation. While transportation impacts under this alternative would be slightly greater than the proposed project, this alternative would eliminate the proposed project's potentially significant impacts. The No Project Alternative would not meet any of the project objectives.

1.6.1 Relocation of the Track and Field to the Northeastern Corner of the Campus Alternative

Under this Alternative, the proposed track and field and associated improvements, as envisioned under the proposed project, would be relocated to the northeastern corner of the La Sierra HS campus (i.e., east of its current location), as shown in Figure 7.3, *Relocation of the Track and Field to the Northeastern Corner of the Campus Alternative*. To accommodate the relocation of the track and field to the northeastern corner of the campus, the baseball and softball fields would be relocated to the southeastern corner of the campus, and the soccer field would be relocated to where the existing track and field is located (east of the existing parking lot). The home bleachers and away bleachers would be placed to the north and south of the relocated track and field, which would be south of Collett Elementary School instead of the residences adjacent to the campus' northern boundary. One of the solar arrays at the southeastern corner of the campus would be relocated elsewhere to accommodate the baseball and softball fields. Compared to the proposed project's cost, this alternative would result in an increase of \$10.8 million.

The Relocation of the Track and Field to the Northeastern Corner of the Campus Alternative would result in less glare and light (aesthetics) impacts, similar impacts to the proposed project for cultural, paleontological, and tribal cultural resources, and energy. Air quality, greenhouse gas emissions, and transportation impacts would be greater than the proposed project during construction and the same during operational activities. Noise impacts would be similar to the proposed project during construction, and less during operation. No Significant and Unavoidable Impacts for the proposed project's objectives, it would cost an additional \$10.8 million compared to the proposed project, which is cost prohibitive, and would limit the District's budget for other safety- and security-related projects.

1.7 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the lead agency as to:

- 1. Whether this DEIR adequately describes the environmental impacts of the project.
- 2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.

- 3. Whether the proposed land use changes are compatible with the character of the existing area.
- 4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
- 5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the DEIR.
- 6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

1.8 AREAS OF CONTROVERSY

The proposed project may generate areas of controversy, but at the date of publication, none have been raised by the community, public agencies, or other organizations. Comments received during circulation of the NOP are included in Appendix 2-1.

1.9 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table ES-1, Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance After Mitigation, summarizes the conclusions of the environmental analysis contained in this Draft EIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

ant No mitig	ation measures are required	
ant No mitig	ation measures are required.	
		Less Than Significant
ant No mitig	ation measures are required.	Less Than Significant
ant No mitig	ation measures are required.	Less Than Significant
AE-1 AE-2 AE-3	The Alvord Unified School District shall soften the visual impact of the existing boundary wall and proposed bleachers, as well as provide light shielding, by installing columnar evergreen tree species with minimal fruit, flower, and leaf litter (such as Cupressus or Thuja) on the District's side of the wall. The trees shall be spaced to achieve canopy-to-canopy coverage within three years and shall reach a minimum height of 15 feet. Following the installation of the field lights, the Alvord Unified School District shall take light measurements to confirm which residences are impacted by light levels exceeding 0.5 foot-candles at the building facade. Once confirmed, these residences will be eligible for compensation for window treatments designed to reduce interior light levels (initially determined to be 10916, 10920, 10928, and 10932 Arrowwood Drive; however, applicable residences shall be determined once the final lighting plans have been prepared).	Significant and Unavoidable
	Int No mitig	Int No mitigation measures are required. Int No mitigation measures are required. Int AE-1 The Alvord Unified School District shall soften the visual impact of the existing boundary wall and proposed bleachers, as well as provide light shielding, by installing columnar evergreen tree species with minimal fruit, flower, and leaf litter (such as Cupressus or Thuja) on the District's side of the wall. The trees shall be spaced to achieve canopy-to-canopy coverage within three years and shall reach a minimum height of 15 feet. AE-2 Following the installation of the field lights, the Alvord Unified School District shall take light measurements to confirm which residences are impacted by light levels exceeding 0.5 foot-candles at the building facade. Once confirmed, these residences will be eligible for compensation for window treatments designed to reduce interior light levels (initially determined to be 10916, 10920, 10928, and 10932 Arrowwood Drive; however, applicable residences shall be determined once the final lighting plans have been prepared). AE-3 Six months prior to holding the first spectator event, impacted homeowners along Arrowwood Drive shall document (e.g., videos, photographs, etc.) the need for additional spillover light blocking mechanisms (e.g., shutters, blinds, etc.); have a licensed contractor provide an estimate for installing blinds, shutters, etc.; and then provide the cost estimate to the District for their

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation	
		 review. Upon operations of the lighting, light measurements (see Mitigation Measure AE-2) shall be taken at each impacted window to determine if light levels will exceed 0.5 foot-candles, and only windows that are exposed to light levels that exceed 0.5 foot-candles shall be accounted for in the cost estimates. Payments shall be made at least three months prior to the first lighting of the field. A homeowner's refusal to accept payment shall not be considered the District's failure to accomplish this mitigation payment. The District shall pay an amount of up to \$4,000 per impacted house for mitigation at the time project improvements are proposed. AE-4 The Alvord Unified School District shall program the lighting control system to restrict any activities to no later than 10:30 PM, with the exception of special events that occur periodically throughout the year (e.g., homecoming, graduation). 		
5.2 AIR QUALITY				
Impact 5.2-1: The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. [Thresholds AQ-1]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
Impact 5.2-2: Construction activities associated with the proposed project would not generate short-term emissions that exceed South Coast AQMD's significance thresholds and would not cumulatively contribute to the nonattainment designations of the SoCAB. [Threshold AQ-2]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
Impact 5.2-3: Operational activities associated with the proposed project would not generate long-term emissions that exceed South Coast AQMD's significance thresholds and would not cumulatively contribute to the nonattainment designations of the SoCAB. [Threshold AQ-2]	Less Than Significant	No mitigation measures are required.	Less Than Significant	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation	
Impact 5.2-4: Construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations of toxic air contaminants. [Threshold AQ-3]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
Impact 5.2-5: Operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations of criteria air pollutants and toxic air contaminants. [Threshold AQ-3]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
Impact 5.2-6: The proposed project would not result in other emissions that would adversely affect a substantial number of people. [Threshold AQ-4]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
5.3 CULTURAL AND PALEONTOLOGICAL RESOURCES				
Impact 5.3-1: Development of the proposed project would not impact an identified historic resource. [Threshold C-1]	No Impact	No mitigation measures are required.	No Impact	
Impact 5.3-2: Development of the proposed project could impact archaeological resources. [Threshold C-2]	Potentially Significant	CUL-1 If cultural resources are encountered during ground-disturbing activities, work in the immediate area shall cease, and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find(s). If the discovery proves to be significant under CEQA, additional work such as data recovery excavation may be warranted and will be reported to the Alvord School District. If significant Native American cultural resources are discovered, the archaeologist on call shall contact the applicable Native American tribal contact(s). If requested by the Native American tribe(s), District, or archaeologist on call shall, in good faith, consult on the discovery and its disposition (e.g., avoidance, preservation, reburial, return of artifacts to tribe).	Less Than Significant	
Impact 5.3-3: Grading activities could potentially disturb human remains. [Threshold C-3]	Less Than Significant	No mitigation measures are required.	Less Than Significant	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.3-4: Development of the proposed project could impact paleontological resources. [Threshold C-4]	Potentially Significant	CUL-2 A qualified paleontologist shall be on call in the event that paleontological resources are found during ground-disturbing activities. The paleontologist shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossils. The paleontologist shall be empowered to temporarily halt or divert equipment to allow for the removal of abundant or large specimens in a timely manner.	Less Than Significant
5.4 ENERGY	•		
Impact 5.4-1: The proposed project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. [Threshold E-1]	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.4-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. [Threshold E-2]	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.5 GREENHOUSE GAS EMISSIONS		-	
Impact 5.5-1: The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. [Threshold GHG-1]	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.5-2: The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. [Threshold GHG-2]	Less Than Significant	No mitigation measures are required.	Less Than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation		
5.6 NOISE					
Impact 5.6-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project, but would not exceed applicable noise standards. [Threshold N-1]	Less Than Significant	No mitigation measures are required.	Less Than Significant		
Impact 5.6-2: Long-term operation of the proposed project would result in a significant increase in noise. [Threshold N-1]	Potentially Significant	 N-1 The Alvord Unified School District shall program the PA system to restrict any activities to no later than 10:30 PM, with the exception of special events that occur periodically throughout the year (e.g., homecoming, graduation). N-2 Three months prior to holding the first spectator event, the Alvord Unified School District shall have hired a construction manager to prepare a cost estimate per impacted home along Arrowwood Drive to fund installation of upgraded windows to provide additional noise attenuation. The impacted homes have initially been determined to be the residences extending from 10900 to 11012 Arrowwood Drive however, all applicable residences shall be determined once plans have been finalized. Additional acoustic investigations shall be conducted to define the windows of habitable rooms that exceed an interior noise level of 45 dBA, and shall require installation of upgraded windows (e.g., existing double-paned windows would not warrant replacement). Working with qualified contractor(s), the District shall complete cost estimates for each house, and deposit such funds in an escrow account. Homeowners will be responsible for contracting with qualified contractors and funds not exceeding the mitigation payment shall be released by the escrow company upon receipt of a signed improvement contract. The District shall pay an amount of up to \$4,000 per impacted house at the time project improvements are proposed. N-3 Prior to operational activities, the District shall develop and enforce a good-neighbor policy for sports field events. Signs shall be receted at entry points that state prohibited activities during an event (e.g., use of air horns, unapproved audio amplification systems, bleacher foot-stomping, loud activity in parking lots upon exiting the field), and events shall be monitored by the District staff to ensure the good-neighbor policy is implemented 	Significant and Unavoidable		

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		 N-4 During subsequent design phases of the bleachers and PA system, the District's sound system contractor shall create a Stadium Sound System Design Plan. The project's sound system design goal shall aim at incorporating as many directional low-power speakers as practical that are located as close to the event attendees as practical while ensuring that the speakers are not projecting to the residences towards the north. The design shall include design specifications that optimize the stadium sound system for speaker placement, speaker dispersion pattern, and speaker acoustic output as well as minimized spill-over sound levels into the adjacent residential areas. N-5 During the final design stage, the proposed bleachers shall incorporate solid backing and vertical panels to enclose foot wells to provide track and field noise shielding to adjacent residential uses. N-6 During a second, future design phase, locate HVAC units on the southern sic of the proposed field house, at least 75 feet from the residential property line to the north of the project site. 	
Impact 5.6-3: The proposed project would not result in significant short-term groundborne vibration and groundborne noise. [Threshold N- 2]	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.6-4: The project site is not within the vicinity of a private airstrip or 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. [Threshold N-3]	No Impact	No mitigation measures are required.	No Impact

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation	
5.7 TRANSPORTATION		·		
Impact 5.7-1: The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. [Threshold T-1]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
Impact 5.7-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). [Threshold T-2]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
Impact 5.7-3: The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). [Threshold T-3]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
Impact 5.7-4: The proposed project would not result in inadequate emergency access. [Threshold T-4]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
Impact 5.7-5: The proposed project would result in inadequate parking capacity during construction, but would not result in inadequate parking during operations. [Threshold T-5]	Less Than Significant	No mitigation measures are required.	Less Than Significant	
5.8 TRIBAL CULTURAL RESOURCES				
Impact 5.8-1: The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). [Threshold TCR-1.i]	No Impact	No mitigation measures are required.	No Impact	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.8-2: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency to be significant pursuant to criteria in Public Resources Code section 5024.1(c). [Threshold TCR-1.ii]	Potentially Significant	Implement Mitigation Measure CUL-1	Less Than Significant

2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. This draft environmental impact report (DEIR) has been prepared to satisfy CEQA and the CEQA Guidelines. The environmental impact report (EIR) is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (CEQA § 21067). The Alvord Unified School District has the principal responsibility for approval of the La Sierra High School Track and Field project. For this reason, the Alvord Unified School District (District) is the CEQA lead agency for this project.

The intent of the DEIR is to provide sufficient information on the potential environmental impacts of the proposed La Sierra High School Track and Field project (proposed project) to allow the District to make an informed decision regarding approval of the project. Specific discretionary actions to be reviewed by the District are described in Section 3.4, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, §§ 15000 et seq.)

The overall purpose of this DEIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the development and operation of the proposed project. This DEIR addresses effects that may be significant and adverse; evaluates alternatives to the project; and identifies mitigation measures to reduce or avoid adverse effects.

2.2 NOTICE OF PREPARATION

The District determined that an EIR would be required for this project and issued a Notice of Preparation (NOP) on November 1, 2024 (see Appendix 2-1, *NOP and NOP Comment Letters*). In addition, the District held a public scoping meeting on November 13, 2024, at the District boardroom, and a community meeting on November 14, 2024, at the La Sierra High School. Comments received during the NOP's public review period, from November 1, 2024, to December 5, 2024, are in Appendix 2-1.

The NOP process helps determine the scope of the environmental issues to be addressed in the DEIR. Based on this process for the project, certain environmental categories were identified as having the potential to result in significant impacts. Issues considered Potentially Significant are addressed in Chapter 5, *Environmental Analysis,* of this DEIR, but issues identified as Less Than Significant or No Impact are discussed in Chapter 8, *Impacts Found Not to be Significant,* of this DEIR. Table 2-1, *NOP and Community Meeting Comment Summary,* provides a list of the comments received during the NOP public review period and during the community meeting; there were no attendees at the scoping meeting.

		ominumity meet	ng ooninient Summary	
Commenting Agency/Person	Date	Comment Topic	Comment Summary	Issue Addressed in Chapter/Section:
Comment Letters				
City of Riverside	11/5/2024	Aesthetics, Noise, Transportation	 Request to review the scope and traffic analysis report(s) and requests the reports adhere to the City of Riverside traffic study guidelines Requests that the traffic analysis report(s) eviduate redestrias improvements at Leoport 	Section 5.1, Aesthetics Section 5.6, Noise Section 5.7, Transportation
			Sierra and Spaulding	
			 Requests that noise impacts be evaluated in accordance with Title 7 of the Riverside Municipal Code (RMC) 	
			 Requests that outdoor lighting be evaluated for compliance with Chapter 19.556 of the RMC 	
Department of Toxic Substances Control (DTSC)	11/5/2024	Hazards and Hazardous Materials	• States that the District shall comply with the requirements of the Education Code Sections 17210, 17213.1, and 1723.2 if using state funds	Chapter 8, Impacts Found Not to Be Significant
			Recommends that all imported soil and fill material be tested to assess any contaminants of concern meet screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual	
			 Requests that if buildings or other structures are demolished, then surveys should be conducted for the presence of hazardous materials 	
Cynthia Fan	11/7/2024	Project Description	 Asked if the field would be natural or synthetic turf 	Chapter 3, Project Description

 Table 2-1
 NOP and Community Meeting Comment Summary

		ominanity week	ng ooninnent ourninury	
Commenting Agency/Person	Date	Comment Topic	Issue A Comment Summary Chap	Addressed in ter/Section:
Riverside County Flood Control and Water Conservation District	11/12/2024	Hydrology and Water Quality	 States that the proposed project shall comply with all applicable federal, state, and local environment laws, as well as with the mitigation measures of the CEQA document (if any) Chapter 8, Not to Be 3 	Impacts Found Significant
Riverside Transit Agency	11/12/2024	N/A	States that the Agency has no comments N/A regarding the proposed project	
Native American Heritage Commission	11/21/2024	Cultural Resources, Tribal Cultural Resources	Provides protocol and requirements under Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18), and recommendations for Cultural Resources Assessments Resources	8, Cultural and gical Resources 2, Tribal Cultural
Cynthia Fan	12/5/2024	Hazards, Hydrology, Greenhouse Gases	 Concerned about the Pre- and Polyfluoroalkyl Substances (PFAS) within artificial turf and requests review of PFAS impacts Suggests the use of natural turf; provides recommendations if the use of synthetic turf is selected 	2-2, Statement d Polyfluoroalkyl s (PFAS)
Community Meetin	g	-		
Member of the Public	11/14/2024	Project Description	• Asked what the process is for permits during the design phase Chapter 3, Description	Project
Member of the Public	11/14/2024	N/A	Asked if finances have been relocated due to delays Addressed Community	during the / Meeting
Member of the Public	11/14/2024	Project Description	• Asked about the seating capacity of the Stadium Chapter 3, Description	Project 1
Member of the Public	11/14/2024	Project Description	• Asked if there will be a parking loss due to the proposed project Chapter 3, Description	Project 1
Member of the Public	11/14/2024	Project Description, Transportation	Asked about construction related delivery materials, staging, transportation, and campus operational impacts. Chapter 3, Description Section 5.7	Project n ', Transportation
Member of the Public	11/14/2024	Project Description	Asked if there will be construction related impacts to current sports activities on campus	Project 1
Member of the Public	11/14/2024	Project Description	Asked if Phase 1 of the proposed project Chapter 3, would be CIF regulated for every sport Description	Project 1
Member of the Public	11/14/2024	Project Description	• Asked when will the stadium and field be Chapter 3, accessible for use Description	Project
Member of the Public	11/14/2024	Project Description	Asked when construction will be completed Chapter 3, Description	Project
Member of the Public	11/14/2024	N/A	Asked why there is a delay in completing Phase 2 Addressed Community	during the / Meeting
Member of the Public	11/14/2024	N/A	Asked if they will receive an update on Phase 2 Addressed Community	during the / Meeting
Member of the Public	11/14/2024	Project Description	Asked if the track would include high jump pits, hurdles, and blocks Description	Project
Member of the Public	11/14/2024	N/A	Asked if new football equipment would also be included	during the / Meeting

 Table 2-1
 NOP and Community Meeting Comment Summary

Commenting Agency/Person	Date	Comment Topic		Comment Summary	Issue Addressed in Chapter/Section:
Member of the Public	11/14/2024	N/A	•	Asked why the project is phased	Addressed during the Community Meeting
Member of the Public	11/14/2024	N/A	•	Asked why the campus is the last to receive field improvements	Addressed during the Community Meeting

 Table 2-1
 NOP and Community Meeting Comment Summary

2.3 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on the comments received in response to the NOP, and comments received at the community meeting conducted by the District. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, the DEIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance.

The information in Chapter 3, *Project Description*, establishes the basis for analyzing future, project-related environmental impacts. However, further environmental review by the District may be required if there are substantial changes to the proposed project from what was analyzed in the DEIR.

2.3.1 Impacts Considered Less Than Significant

The District determined that 12 environmental impact categories were not significantly affected by or did not affect the proposed La Sierra High School Track and Field Project. These categories are evaluated in Chapter 8, *Impacts Found Not to Be Significant*.

- Agriculture and Forest Resources
- Biological Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildfire

2.3.2 Potentially Significant Adverse Impacts

The District determined that five environmental factors have potentially significant impacts if the proposed project is implemented.

- Aesthetics
- Air Quality
- Cultural and Paleontological Resources
- Energy
- Greenhouse Gas Emissions
- Noise
- Transportation
- Tribal Cultural Resources

As discussed in Chapter 5, *Environmental Impacts*, Air Quality, Cultural and Paleontological Resources, Energy, Greenhouse Gas Emissions, Transportation, and Tribal Cultural Resources were all found to be either less than significant or less than significant with mitigation measures.

2.3.3 Unavoidable Significant Adverse Impacts

This DEIR identifies two significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the proposed project. Unavoidable adverse impacts may be considered significant on a project-specific basis, cumulatively significant, and/or potentially significant. The District must prepare a "statement of overriding considerations" before it can approve the project, attesting that the decision-making body has balanced the benefits of the proposed project against its unavoidable significant environmental effects and has determined that the benefits outweigh the adverse effects, and therefore the adverse effects are considered acceptable. The impacts that were found in the DEIR to be significant and unavoidable are:

- Impact 5.1-4 The proposed project would result in new sources of substantial light and glare.
- Impact 5.6-2 Project implementation would generate a substantial increase in noise near existing residences during operational activities.

2.4 INCORPORATION BY REFERENCE

Some documents are incorporated by reference into this DEIR, consistent with Section 15150 of the CEQA Guidelines, and they are available for review at the District office.

- City of Riverside Municipal Code
- City of Riverside General Plan

2.5 FINAL EIR CERTIFICATION

This DEIR is being circulated for public review for 45 days. Interested agencies and members of the public are invited to provide written comments on the DEIR to the District address shown on the title page of this document. Upon completion of the 45-day review period, the Alvord Unified School District will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to the Alvord Unified School District Board of Education for potential certification as the environmental document for the project. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearing before the District.

The DEIR is available to the general public for review at:

- District Office, 9 KPC Parkway, Corona, CA 92879
- La Sierra High School Office, 4145 La Sierra Ave, Riverside, CA 92505

2.6 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code Section 21081 or adopted a Negative Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Mitigated Negative Declaration.

The Mitigation Monitoring and Reporting Program (MMRP) for the La Sierra High School Track and Field Project will be completed as part of the Final EIR, prior to consideration of the project by the Alvord Unified School District School Board of Education.

3. Project Description

3.1 PROJECT LOCATION

La Sierra High School (La Sierra HS) is at 4145 La Sierra Avenue in the City of Riverside in California (Assessor's Parcel Numbers [APNs] 142130001, 142140002) (see Figure 3-1, Regional Location). The La Sierra High School Track and Field Project (proposed project) would be developed within 10.52 acres of the northern portion (project site) of the 48-acre campus.

The City of Riverside is bordered by the City of Jurupa Valley to the north, the City of Moreno Valley and unincorporated Riverside County to the east, unincorporated Riverside County to the south, and the City of Norco and unincorporated Riverside County to the west. Regional access to the campus is provided by Interstate 5 (I-5), 4.45 miles west, and State Route 91 (SR-91), 0.60 mile south of the campus. The campus is surrounded by residential uses, Collett Avenue, and Collett Elementary School to the north; and residential uses to the east, south, and west. Access to the campus is via La Sierra Avenue, adjacent to the campus's western boundary. Figure 3-2, *Local Vicinity* and Figure 3-3, *Aerial Photograph*, show the campus, including the project site, in its local context.

3.2 STATEMENT OF OBJECTIVES

Section 15124(b) of CEQA Guidelines requires a project description to include a statement of the objectives of a project that address the underlying purpose. The following specific objectives have been identified for the proposed project:

- 1. Provide adequate stadium facilities at the La Sierra High School to accommodate school sport games and school events at the campus without the need for using remote sites.
- 2. Provide lighting to allow night use of the track and field to accommodate school-related events and activities.
- 3. Provide bleachers with adequate capacity to accommodate various spectator events currently held on and off campus.
- 4. Utilize existing space to enhance opportunities for after-school athletic and extracurricular activities.
- 5. Enhance sense of community by allowing home games on campus.
- 6. Upgrade the athletic fields to boost school pride.

3. Project Description



Figure 3-1 - Regional Location

PlaceWorks
Figure 3-2 - Local Vicinity



Figure 3-3 - Aerial Photograph



3.3 PROJECT CHARACTERISTICS

"Project," as defined by the CEQA Guidelines, means:

... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)...enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700. (14 Cal. Code of Reg. § 15378[a])

3.3.1 Proposed Project

The Alvord Unified School District (AUSD or District) is proposing to renovate its sports facilities in two phases (see Figure 3-4, *Conceptual Site Plan*). The proposed project would not impact student or staff capacity at La Sierra HS.

- Phase 1
 - Renovate the existing track and field.
 - Add field lighting, public address (PA) system, scoreboard, and bleachers to accommodate 1,200 spectators.
- Phase 2¹
 - Add bleachers for an additional 1,600 spectators—total capacity for 2,800 spectators.
 - Construct a 5,500-square-foot field house that would include restrooms, ticket office, storage, concessions stand, and team room.
 - Repave and restripe the 134,000-square-foot parking lot.
 - Relocate the existing tennis courts (59,677 square feet) by approximately 10 feet to the south.
 - Construct new access from the main parking lot in the northwestern portion of the site to the bleachers.
 - Reduce the number of parking spaces by 136 parking stalls.

This DEIR analyzes the scope of both phases of the proposed project. However, until funding for Phase 2 is available, the District will only move forward with the construction of Phase 1.

The District would serve as the lead agency for the proposed project in accordance with the California Environmental Quality Act (CEQA), Section 15051(c).

¹ While this DEIR analyzes both phases of the proposed project, the proposed scope under Phase 2 is contingent on funding availability. At this time, the District will be moving forward with Phase 1 of the proposed project.



Project Site Boundary

Source: Huckabee

3. Project Description

Figure 3-4 - Conceptual Site Plan

NOTES





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3.3.1.1 PROPOSED TRACK AND FIELD RENOVATIONS

The current track and field consists of a dirt track with a natural grass field and is 164,606 square feet. Under the proposed project, the grass and dirt track would be removed and replaced with synthetic turf and an allweather rubber track. Upon project completion, there would be approximately 87,000 square feet of allweather rubber track and 103,001 square feet of synthetic turf. The track and field would accommodate sports activities such as football, soccer, and other track and field games and practices when construction is complete. In addition, sports goal posts, shock pads, markings, and a field cooling system would be installed. Currently, the football team at La Sierra HS utilizes the Norte Vista High School (NVHS) stadium for home games. Upon project completion, the La Sierra HS football team would play home games at the project site.

3.3.1.2 FIELD HOUSE

The proposed project would construct a 5,500-square-foot field house that would include restrooms, ticket office, storage, concessions stand, and team room. The proposed project would consist of energy efficient features such as a high-efficiency heating, ventilation, and air conditioning (HVAC) system; light-emitting diode (LED) lighting; and low flow toilets. The buildings would be designed and constructed to meet the 2022 Building Energy Efficiency Standards.

3.3.1.3 FIELD AMENITIES AND LIGHTING

The proposed project would include field lighting, new home and away bleachers, a single PA system, and one scoreboard. Four new field light poles would light the field for nighttime events and would be on the track and field; see Figure 3-5, *Light Pole Locations*.

The new home bleachers would be in the southern portion of the project site, north of the tennis courts, and the away bleachers would be in the northern portion of the project site, approximately 10 feet south of the northern property line.

The PA system's speakers would be placed on the proposed light poles for school announcements and emergency alerts and would be used during the school day. The track and field would have its own PA system speakers on the scoreboard and light poles. The PA system would be inside the Press Box at the top of the home bleachers.

The proposed project would also install one scoreboard, which would be east of the new track and field.

3.3.1.4 TENNIS COURTS RELOCATIONS

To accommodate the renovated track and field and other project components, the campus's 59,677-squarefoot tennis courts, which are south of the track and field, would be relocated approximately 10 feet south of their current location. The existing eight tennis courts would not be expanded.



La Sierra High School Boundary

Project Site Boundary

Source: MUSCO 2024.

3. Project Description

Figure 3-5 - Light Pole Locations

Equipment List For Areas Shown						
		Pole			Luminaires	
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE
2	F1-F2	90'	-	90'	TLC-LED-1200	1
				90'	TLC-LED-1500	7
				90'	TLC-LED-900	3
				80'	TLC-RGBW	2
				70'	TLC-LED-550	2
				15.5'	TLC-BT-575	2
2	F3-F4	90'	-	90'	TLC-LED-1200	2
				90'	TLC-LED-1500	9
				80'	TLC-RGBW	2
				70'	TLC-LED-550	2
				20'	TLC-BT-575	2
4 Totals					68	





3.3.1.5 VEHICULAR PARKING AND PEDESTRIAN ACCESS

The main parking lot at the northwestern portion of the project site provides access to the sports facilities. Currently, this parking lot consists of 430 parking spaces, including 11 ADA parking spaces; however, 136 parking spaces would be removed to accommodate construction of the field house, including 2 ADA parking spaces. A total of 294 parking spaces would remain upon project completion, including 9 ADA parking spaces. The parking lot would also include ADA parking upgrades and would provide 25 EV-capable parking spaces and six EV-charging stations.

Additionally, there are two other existing parking lots on campus that would accommodate parking during the operations of the proposed project. The first parking lot is in the southwestern portion of the campus, along La Sierra Avenue, and includes 44 parking spaces, including two ADA parking spaces. The second parking lot is in the southern portion of the campus and has 115 parking spaces, including five ADA parking spaces. The soccer field in the northeastern portion of the campus would also be used to accommodate overflow parking during capacity events on campus; vehicles would access the soccer field for parking via Cass Street

Three driveways to the campus are on La Sierra Avenue, and a gated maintenance/emergency access driveway is at the intersection of Jones Avenue and Cass Street. The southernmost driveway, near the La Sierra Avenue and Cochran Avenue intersection, provides ingress to the campus, the middle driveway provides ingress and egress access to the campus, and the northernmost driveway provides egress from the main parking lot onto La Sierra Avenue. All three driveways provide access to the main parking lot and the project site.

From the main parking lot, direct pedestrian access paths would be constructed to both the home and away bleachers. Approximately, 1,300 linear feet of crowd fencing would be installed. Additionally, an ADA path of travel from the parking lot to the home and away bleachers would also be constructed. Pedestrian access would also be provided around the perimeter of the track and field.

3.3.1.6 EMERGENCY ACCESS

The proposed project would provide emergency access to the track and field with a fire access road from the main parking lot. A gated maintenance/emergency access point at the northeastern portion of the campus, via the intersection of Cass Street and Jones Avenue, provides access to the sports fields.

3.3.1.7 LANDSCAPING

Landscaping on the project site would consist of plants, natural turf, and synthetic turf. Planting would be on the southwestern side of the proposed field house, in between it and the parking lot, and would consist of 1,362 square feet of planting. Natural turf would be in two locations on the project site. The first location would be in the main parking lot, near the field house, and would be 1,845 square feet. The second location would be to the northeastern and southeastern sides of the proposed track and field and would consist of 12,896 square feet. In total, the natural turf would be 14,742 square feet. The synthetic turf would be exclusively located on the proposed track and field and would be 103,001 square feet.

3.3.1.8 STORMWATER INFRASTRUCTURE

Geotech fabric materials and permeable drain rock would be installed under the synthetic turf to ensure adequate drainage. Additionally, an 8-inch perimeter drain and storm drain would be installed.

3.3.2 Use and Scheduling

The proposed track and field would be primarily utilized for sporting activities that currently take place offcampus at neighboring schools. The three main sports that would utilize the new track and field are football, soccer, and track and field as well as other field events. Currently, the football team at La Sierra HS utilizes the Norte Vista High School stadium for home games; all other sports (soccer, track and field, etc.) are played at La Sierra HS. However, the track and field would also be utilized for non-sports events such as graduation, senior events, sports awards, and physical education classes.

The proposed schedule for sports events utilizing the track and field would be similar to the current sports schedule. Football, girls and boys soccer, and the track and field team would use the track and field for afterschool practices every day from 3:30 pm to 8:00 pm. The football team practice starts in June and ends in October, the boys and girls soccer team practice starts in October and ends in February, and the track and field team practice starts in February and ends in April.

Football, girls and boys soccer, and the track and field team would host games at different days and times throughout the weekday. Specifically, home football games would occur every other week during the season from 6:30 pm to 10:30 pm starting in August and ending in October. Girls and boys soccer matches would occur twice a week from November to January from 3:30 pm to 6:00 pm. The track and field team would host track and field events once a week during the season from February to April from 3:30 pm to 7:00 pm.

Graduation would occur once a year in May from 5:00 pm to 8:00 pm. Other non-sports events would include senior signing day, senior sunset, honor roll awards, and sports awards. The sports awards would happen three to five times in the Spring from 4:00 pm to 6:00 pm. Senior events, such as senior singing day and senior sunset, would happen one to two times a week in May; honor roll awards would occur twice a year during the school day. Table 3-1, *La Sierra High School Sports Field Proposed Event Schedule*, shows the proposed sports activities, days, and times.

	Anticipated Number		Time		Outdoor
Activity/Use	of Home Events	Days of Week	Start	End	Lighting?
Football (Fall - August to October)				
Freshman Football	5 per year	Wednesday/Thursday	4:00 pm	6:30 pm	Yes
Junior Varsity	5 per year	Thursday	4:00 pm	6:30 pm	Yes
Varsity Football	5 per year	Thursday/Friday	6:30 pm	10:30 pm	Yes ¹
Track and Field (Winter and Sprin	g)				
Track and Field	3 per year	Thursday	3:15 pm	6:00 pm	Yes

 Table 3-1
 La Sierra High School Sports Field Proposed Event Schedule

	Anticipated Number		Ti	Outdoor	
Activity/Use	of Home Events	Days of Week	Start	End	Lighting?
Soccer (Winter)					
Girls Freshman Soccer	11 per year	Monday - Thursday	3:30 pm	6:00 pm	Yes
Girls JV Soccer	13 per year	Monday – Saturday ³	3:30 pm	6:00 pm	Yes
Girls Varsity Soccer	13 per year	Monday – Saturday ³	3:30 pm	6:00 pm	Yes
Boys Freshman Soccer	6 per year	Tuesday/Thursday	3:30 pm	6:00 pm	Yes
Boys JV Soccer	9 per year	Tuesday/Thursday	3:30 pm	6:00 pm	Yes
Boys Varsity Soccer	9 per year	Tuesday/Thursday	3:30 pm	6:00 pm	Yes

Table 3-1La Sierra High School Sports Field Proposed Event Schedule

^{1.} Lights would be shut off at 10:30 pm after varsity football games.

² If necessary, lights would be shut off before 9:00 pm after varsity girls/boys soccer games.

^{3.} Saturday games are tournament games and may be held during the day.

The proposed project would be made available for community-sponsored events after school hours in accordance with the Civic Center Act (Education Code Sections 38130–38139) and District policy. The project site can also be rented for events not related to the District.

3.3.3 Project Construction

Construction of the proposed project would occur in two phases. Phase 1 is planned to begin in June 2025 and end in June 2026. Construction of Phase 2 is dependent on funding.² Construction activities would occur Monday through Friday, from 7:00 am to 4:00 pm. The District will provide alternate areas to accommodate sports and event activities that would be impacted during construction.

3.3.4 Discretionary Approvals

3.3.4.1 LEAD AGENCY

The Alvord Unified School District is the lead agency under CEQA and has the approval authority over the proposed project. Discretionary actions for the proposed project would include: (1) certification of the environmental document and (2) approval of the proposed project.

3.3.4.2 OTHER AGENCY ACTION REQUESTED

The Alvord Unified School District is the lead agency under CEQA and has the approval authority over the proposed project. The District would require approval and/or coordination from the following agencies to implement the proposed project.

² While this DEIR analyzes both phases of the proposed project, the proposed scope under Phase 2 is contingent on funding availability. At this time, the District will be moving forward with Phase 1 of the proposed project.

State and Regional Agencies

The District would seek approval of the proposed project from the Division of the State Architect (DSA). The District would seek approval of a construction stormwater runoff and National Pollutant Discharge Elimination System permits from Santa Ana Regional Water Quality Control Board; construction permits from South Coast Air Quality Management District; and a State Water Resources Control Board–approved Storm Water Pollution Prevention Plan. Since the proposed project would not receive state funding, California Department of Education and California Department of Toxic Substances Control approvals are not required.

3.4 INTENDED USES OF THE EIR

This Draft EIR examines the environmental impacts of the proposed project. This DEIR also addresses various actions by the District and others to adopt and implement the proposed project. It is the intent of this DEIR to evaluate the environmental impacts of the proposed project, thereby enabling the Alvord Unified School District, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. The anticipated approvals required for this project are:

Lead Agency	Action
Alvord Unified School District	Consider Final EIR for certification and project approval.
Responsible Agencies	Action
Santa Ana Regional Water Quality Control Board	Construction stormwater runoff permits, National Pollutant Discharge Elimination System permit.
State Water Resources Control Board	Review of Notice of Intent to obtain permit coverage; issuance of general permit for discharges of stormwater associated with construction activity; review of Storm Water Pollution Prevention Plan.
South Coast Air Quality Management District	Construction Permit
Department of the State Architect	Approval of construction and design plans.

3.4.1 Lead Agency Approval

The District is the lead agency under CEQA and is carrying out the proposed project. To approve the proposed project, the Alvord Unified School District Board of Education must first certify the Final EIR (FEIR). The board would consider the information in the EIR when making its decision to approve or deny the proposed project, or in directing modifications to the proposed project in response to the EIR's findings and mitigation measures. The EIR is intended to disclose to the public the proposed project's details, analyses of the proposed project's potential environment impacts, and identification of feasible mitigation or alternatives that would lessen or reduce significant impacts to less than significant levels.

4.1 INTRODUCTION

This section provides a "description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, ... from both a local and a regional perspective" (Guidelines § 15125[a]), pursuant to provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines The environmental setting provides the baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed project.

4.2 REGIONAL ENVIRONMENTAL SETTING

4.2.1 Regional Location

The city of Riverside is in the northwestern portion of Riverside County, in California. It is bordered by the city of Jurupa Valley and unincorporated Riverside County and San Bernardino County to the north, the cities of Norco and Corona to the west, unincorporated Riverside County to the south, and unincorporated Riverside County and Moreno Valley to the east. Regional access to La Sierra High School (La Sierra HS) is provided by State Route 91 (SR-91), approximately 0.6 mile south of the campus, and Interstate 15 (I-15), approximately 4.3 miles west of the campus (see Figure 3-1, *Regional Location*).

4.2.2 Regional Planning Considerations

4.2.2.1 SOUTH COAST AIR BASIN AIR QUALITY MANAGEMENT PLAN

The project area, including the project site, is in the South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (South Coast AQMD) (SCAQMD 2022). Pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law and standards are detailed in the SoCAB Air Quality Management Plan. Air pollutants for which ambient air quality standards (AAQS) have been developed are known as criteria air pollutants—ozone (O₃), carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide, coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead. VOC and NOx are criteria pollutant precursors and go on to form secondary criteria pollutants, such as O₃, through chemical and photochemical reactions in the atmosphere. Air basins are classified as attainment/nonattainment areas for particular pollutants depending on whether they meet AAQS for that pollutant. Based on the State area designation maps, the SoCAB is designated nonattainment for O₃, PM_{2.5}, PM₁₀, and under the National AAQS, the SoCAB is nonattainment for O₃ and PM_{2.5} (CARB 2024). The proposed project's consistency with the applicable AAQS is discussed in Section 5.2, *Air Quality*.

4.2.2.2 GREENHOUSE GAS EMISSIONS REDUCTION LEGISLATION

Current State of California guidance and goals for reductions in greenhouse gas (GHG) emissions are generally embodied in Executive Order S-03-05; Executive Order B-30-15; Assembly Bill 32 (AB 32), the Global Warming Solutions Act (2008); and Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act.

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for California:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

AB 32 was passed by the state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the emissions reduction targets established in Executive Order S-3-05. In 2015, the governor signed Executive Order B-30-15 into law, establishing a GHG reduction target for year 2030, which was later codified under SB 32 in 2016.

In 2008, SB 375 was adopted to connect GHG emissions reductions targets for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled and vehicle trips. South Coast Association of Governments' (SCAG) targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 19 percent per capita reduction from 2005 GHG emission levels by 2035.

The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), known as Connect SoCal, projects that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. It is also projected that implementation of the plan would reduce vehicle miles traveled per capita for year 2045 by 4.1 percent compared to baseline conditions for the year.

The project's ability to meet these regional GHG emissions reduction target goals is analyzed in Section 5.5, *Greenhouse Gas Emissions*.

4.2.2.1 SCAG REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

SCAG is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization (MPO) for this region, which encompasses over 380,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's MPO, SCAG cooperates with the South Coast AQMD, California Department of Transportation, and other agencies in preparing regional planning documents.

The 2024-2050 RTP/SCS Connect SoCal Plan ("Connect SoCal") was adopted on April 4, 2024. Connect SoCal is a long-range visioning plan that allows public agencies who implement transportation projects to coordinate in a manner that supports economic growth, achieves environmental goals, promotes quality of life, and social equity, while ensuring continued access to transportation funding (SCAG 2024). This long-range plan, which is a requirement of the state of California and the federal government, is updated by SCAG every four years to reflect demographic, economic, and policy changes.

Applicability of the 2024-2050 RTP/SCS is considered in Section 5.5, Greenhouse Gas Emissions.

4.2.2.2 RIVERSIDE COUNTY TRANSPORTATION COMMISSION

The Riverside County Transportation Commission (RCTC) is responsible for cooperative regional planning and furthering an efficient multimodal transportation system countywide. The RCTC administers Measure A, which is a half-cent transportation sales tax approved by county voters in 1988 that supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts, and long-term planning studies (RCTC 2024).

4.3 LOCAL ENVIRONMENTAL SETTING

4.3.1 Existing Development and Use

La Sierra HS was built in 1969 and had a 2022-23 enrollment of 1,501 students in grades nine through twelve (La Sierra HS 2021; CDE 2024). La Sierra HS campus is approximately 48 acres. The western portion of campus is generally configured with classroom and school buildings, Sara Hughes Performance Arts Center, school parking lot, and student pick-up/drop-off area. The eastern portion of campus is configured with athletic fields and associated amenities, including baseball and softball fields, tennis courts, hardcourts, a track and field, a swimming pool, soccer/multipurpose field, restrooms, and an additional surface parking lot.

The proposed project would occur in the northern portion of the La Sierra HS campus. The project site encompasses the existing tennis courts, track and field, and the northwestern parking lot, as shown on Figure 3-3, *Aerial Photograph*. The project site is 10.52 acres and is generally flat; the track and field is surrounded by a clay track. There are eight tennis courts to the south of the track and field.

During the school year, the existing track and field facilities are regularly used by the high school for athletic practices, physical education classes, and other scholastic-related events (La Sierra HS 2025). La Sierra HS does not hold varsity games on-site. Currently, the football team at La Sierra HS utilizes the Norte Vista High School stadium for home games.

Freshman and junior varsity football games are held on campus on Wednesday and Thursdays from 4:00 pm to 6:00 pm (La Sierra HS 2025). Additionally, the La Sierra HS cheer team regularly practices at 3:30 pm on the football field and attends school football games. In addition to La Sierra HS uses, outside sporting groups and non-school-related events have been individually permitted by AUSD to use the practice field. During the summer the football field is utilized by a Youth Football Camp. Girls tennis matches are held on the campus

tennis courts on Thursdays and Fridays from 3:30 pm to 6:30 pm. Furthermore, La Sierra HS currently holds the annual graduation ceremony at the Norte Vista High School Zack Earp Stadium.¹

4.3.2 Parking and Access

Main vehicular access to La Sierra HS is provided along La Sierra Avenue with three driveways—the southern driveway provides access to a drop-off/pick-up zone, the central driveway provides access to the parking lot, and the northern driveway provides egress out of the parking lot. The primary campus parking lot is in the northwestern portion of the campus along La Sierra Avenue and provides 430 parking spaces, including 11 ADA parking spaces. A gated maintenance/emergency access point at the northeastern portion of campus, via the intersection of Cass Street and Jones Avenue provides access to the sports fields.

Additionally, there are two other existing parking lots on campus. The first parking lot is in the southwestern portion of the campus and consists of 44 parking spaces, including 2 ADA parking spaces; the second parking lot is in the southern portion of the campus and consists of 115 parking spaces, including 5 ADA parking spaces. The soccer field in the northeastern portion of the campus would be used to accommodate overflow parking during capacity events on campus; vehicles would access the soccer field for parking via Cass Street.

Pedestrian access to the campus includes crosswalks at the intersection of La Sierra Avenue and Spaulding Road, and a sidewalk along the western boundary of the campus. The campus includes internal walkways and paths between buildings throughout the campus and a pathway providing access to all the sports fields.

4.3.3 Location and Land Use

4.3.3.1 PROJECT LOCATION

La Sierra HS is at 4145 La Sierra Avenue (Assessor's Parcel Numbers [APNs] 142130002 and 142140001) in the La Sierra neighborhood of the City of Riverside. The proposed project would be developed within 10.52 acres of the northern portion of 48-acre La Sierra HS.

La Sierra HS is bounded by residential uses, Collett Park, and Collett Elementary School to the north; La Sierra Avenue to the west; and residential uses to the south and east (Figure 3-2, *Local Vicinity*). The project site is bounded by residential uses, Collett Park, and Collett Elementary School to the north; La Sierra Avenue and La Sierra HS educational facilities to the west; a playfield to the east; and education facilities and the La Sierra HS swimming pool to the south.

4.3.3.2 EXISTING GENERAL PLAN LAND USE AND ZONING DESIGNATIONS

La Sierra HS is in the city of Riverside. According to the Riverside General Plan, City Zoning, and Specific Plan Map, the campus is zoned as Single Family Residential (R-1-7000) and has a land use designation of Public Facilities/Institutions (PF) (Riverside 2024a).

¹ The District's athletics schedule changes from year to year; the schedule listed is from the previous school year.

The properties surrounding the campus are zoned Single Family Residential (R-1-7000) and Public Facilities (PF) to the north, and Single Family Residential (R-1-7000) to the west, south, and east (Riverside 2024a).

4.3.4 Scenic Features

La Sierra HS is surrounded by residential uses and public facilities (Collett Elementary School and Collett Park) to the north, and residential uses to the south, east, and west. The surrounding vicinity is fully developed with residential, educational, and public uses. Views around the campus are characterized primarily by residential uses. Views of the mountains can be seen to the north, east, and south of the campus; however, trees, poles lines, streetlights, and houses partially obstruct these views. Details about the proposed project's impacts on scenic features and visual character are provided in Section 5.1, *Aesthetics*.

4.3.5 Climate and Air Quality

As described in Section 4.2.2.1, the City of Riverside is in the SoCAB, which is managed by South Coast AQMD. The SoCAB is designated nonattainment for O₃, PM_{2.5}, PM₁₀, under the California AAQS, and nonattainment for O₃ and PM_{2.5} under the National AAQS (CARB 2024). Additional information regarding air quality and climate change regulations affecting the City of Riverside is provided in Section 4.2.2, *Regional Planning Considerations*. Existing air quality conditions in the city of Riverside, greenhouse gas emissions, and energy consumption are discussed in more detail in Sections 5.2, *Air Quality*; 5.4, *Energy*; and 5.5, *Greenhouse Gas Emissions*.

4.3.6 Tribal Cultural, Cultural, and Paleontological Resources

The City of Riverside was inhabited by the Gabrielinos, Cahuilla, Serrano, and possibly the Luiseno Indians. Ground-disturbing activities, especially in previously undisturbed areas, have the potential to uncover tribal cultural resources. The campus, including the project site, are currently disturbed with educational uses. The campus is not listed as a historic resource (OHP 2024; NPS 2024). Moreover, the Mockingbird Canyon Reservoir, approximately 3.6 miles east of La Sierra HS, is the only location in the city considered to be of paleontological importance (Riverside 2007). Refer to Section 5.3, *Cultural and Paleontological Resources*, and Section 5.8, *Tribal Cultural Resources*, for additional information regarding cultural, paleontological, and tribal cultural impacts.

4.3.7 Noise

The campus is in an urbanized residential neighborhood. Noise sources in the area are typical of urban and suburban noises from transportation and stationary sources. In addition to roadway noise and stationary noise sources (property maintenance, light mechanical equipment, people talking, etc.), the project area is also subject to recurring events of athletic field noise from the existing uses on the project site as well as day-to-day outdoor activities (e.g., periodic landscaping, children playing, animal sounds). Noise-sensitive receptors in the vicinity of the proposed project are the educational uses to the north and residential uses surrounding the campus. Refer to Section 5.6, *Noise*, for additional information regarding the noise environment and an analysis of project-related noise impacts.

4.3.8 Transportation

Regional access to La Sierra HS is provided by SR-91 and I-15. La Sierra HS is bounded by La Sierra Avenue to the west with sidewalks on both sides of the street. Bus Route 15, operated by the Riverside Transit Agency (RTA), stops at the intersections of La Sierra Avenue and Cochran Avenue and La Sierra Avenue and Collett Avenue. Additionally, there are bicycle lanes on La Sierra Avenue. Refer to Section 5.7, *Transportation*, for additional information regarding traffic and transportation impacts.

4.4 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed where they are significant. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great a level of detail as that necessary for the project alone. Section 15355 of the Guidelines defines cumulative impacts as "...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts represent the change caused by the incremental impact of a project when added to other proposed or committed projects in the vicinity.

The CEQA Guidelines (Section 15130 [b][1]) state that the information utilized in an analysis of cumulative impacts should come from one of two sources:

- A. A list of past, present and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; or
- B. A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions.

Depending on the environmental category, the cumulative impact analysis may use either source A or B. Some impacts are site specific, such as cultural resources, and others may have impacts outside the city boundaries, such as regional air quality.

Cumulative impact analyses for several topical sections are also based on the most appropriate geographic boundary for the respective impact. Several potential cumulative impacts that encompass regional boundaries (e.g., air quality and traffic) have been addressed in the context of various regional plans and defined significance thresholds. The cumulative impacts of the proposed project have been addressed for each environmental category discussed in Chapter 5, *Environmental Analysis*, of this DEIR. Table 4-1, *Development Projects for Cumulative Analysis*, lists the cumulative projects considered under Source A.

	Ve Analysis
Project Name	Description
Orangecrest Community Church	15,873.27 sq. ft. Church and related components – 5695 Glenhaven Avenue
Marlborough Northgate Light Industrial/Warehouse Buildings	99,950 sq. ft two industrial non-refrigerated warehouse buildings – 900 Marlborough Avenue
Mission Grove Apartments	347 apartment dwelling units – 375 East Alessandro Boulevard
Kaiser Permanents Riverside Medical Center Hospital	291,494 sq. ft. hospital tower and diagnostic building – 10800 Magnolia Avenue
Wood and Lurin Planned Residential Development Project	96 single-family homes – Krameria Avenue, Lurin Avenue, Wood Road
Arlington Mixed Use Development Project	576,203 sq. ft. residential and commercial uses (388 dwelling units) – 5261 Arlington Avenue
Palmyrita Warehouses	265,758 sq. ft. two warehouse buildings – 1151 Palmyrita Avenue
Tentative Parcel Map No. 39174	Three single-family homes – 841 Alpine Meadows Lane
Source: Riverside 2024b.	

Table 4-1 Development Projects for Cumulative Analysis

4.5 **REFERENCES**

- California Air Resources Board. 2024. Area Designations Maps/State and National. Accessed January 29, 2024. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.
- California Department of Education (CDE). 2024, January 29 (accessed). 2022-23 Enrollment by Ethnicity and Grade, La Sierra High Report (33-66977-3330008). https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthGrd.aspx?cds=33669773330008&agglevel=school&year=2022-23.
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5. Environmental Analysis

Chapter 5 examines the environmental setting of the proposed project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental issue area that was determined to need further study in the EIR. This scope was determined in the notice of preparation (NOP), which was published on November 1, 2024 (see Appendix 2-1), and through public and agency comments received during the NOP comment period from November 1, 2024, to December 5, 2024 (see Appendix 2-1). Environmental issues and their corresponding sections are:

- 5.1 Aesthetics
- 5.2 Air Quality
- 5.3 Cultural and Paleontological Resources
- 5.4 Energy
- 5.5 Greenhouse Gas Emissions
- 5.6 Noise
- 5.7 Transportation
- 5.8 Tribal Cultural Resources

Sections 5.1 through 5.8 provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures designed to reduce significant impacts where required and when feasible. The residual impacts following the implementation of any mitigation measure are also discussed.

Section 8 of the DEIR determined that impacts to the following topical areas would not be significantly affected by implementation of the proposed project: Agriculture and Forestry Resources, Biological Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Utilities and Service Systems, and Wildfire.

Organization of Environmental Analysis

To assist the reader with comparing information between environmental issues, each section is organized under the following eight major headings:

- Environmental Setting
- Thresholds of Significance
- Environmental Impacts
- Cumulative Impacts
- Level of Significance Before Mitigation
- Mitigation Measures
- Level of Significance After Mitigation

5. Environmental Analysis

References

In addition, Chapter 1, *Executive Summary*, includes Table ES-1, *Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation*, which summarizes all impacts by environmental issue.

Terminology Used in This Draft EIR

The level of significance is identified for each impact in this DEIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The project would not change the environment.
- Less than significant. The project would not cause any substantial, adverse change in the environment.
- Less than significant with mitigation incorporated. The EIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and unavoidable.** The project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

5. Environmental Analysis

5.1 **AESTHETICS**

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the proposed project at the La Sierra HS to result in aesthetic impacts at the campus and surrounding community.

This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators; constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1, which would include renovating the track and field and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

5.1.1 Environmental Setting

5.1.1.1 REGULATORY BACKGROUND

State Regulations

State Scenic Highway Program

The State Scenic Highway Program was created in 1963 by the State Legislature to protect and enhance the natural scenic beauty along portions of the state highway system that are determined to be scenic highways. Scenic highways can have an "eligible" designation or be "officially designated." The status of a proposed state scenic highway changes from eligible to officially designated when a local jurisdiction adopts a scenic corridor protection program, then applies to the California Department of Transportation (Caltrans) for scenic highway approval and receives notification from Caltrans that the highway has been officially designated as a Scenic Highway.

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission [CEC]) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The CEC adopted the 2019 Building Energy Efficiency Standards, which went into effect on January 1, 2020. Title 24 requires outdoor lighting controls to reduce energy usage, which in effect reduces outdoor lighting.

Nighttime Sky, CCR Title 24, Outdoor Lighting Standards

The California legislature passed a bill in 2001 requiring the CEC to adopt energy efficiency standards for outdoor lighting, both public and private. In November 2003, the Commission adopted changes to the 24 CCR, Parts 1 and 6, Building Energy Efficiency Standards. These standards became effective on October 1, 2005, and included changes to the requirements for outdoor lighting for residential and nonresidential development. These standards improved the quality of outdoor lighting and helped to reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set for different "lighting zones" (LZ), and the zone for a specific area is based on population figures from the 2000 Census. Areas can be designated LZ1 (dark), LZ2 (rural), or LZ3 (urban). Based on this classification, the project site is designated LZ3.

Local Regulations

City of Riverside General Plan

The Land Use and Urban Design Element and the Open Space and Conservation Element of the Riverside General Plan include the following policies related to visual resources:

Land Use and Urban Design Element

- **Policy LU-3.1.** Pursue methods to preserve hillside open space and natural habitat.
- Policy LU-27.4. Encourage trees on private property to add to the City's urban forest.
- **Policy LU-59.1.** Preserve La Sierra's hillside areas in the natural state as much as feasible, consistent with Proposition R and Measure C.

Open Space and Conservation Element

- **Policy OS-1.1.** Protect and preserve open space and natural habitat wherever possible.
- **Policy OS-1.6.** Ensure that any new development that does occur is effectively integrated through convenient street and/or pedestrian connections, as well as through visual connections.
- Policy OS-2.4. Recognize the value of ridgelines, hillsides and arroyos as significant natural and visual
 resources and strengthen their role as features which define the character of the City and its individual
 neighborhoods.
- Policy OS-2.5. Review the feasibility of creating a "night-time sky" ordinance to reduce light pollution.

City of Riverside Municipal Code

Chapter 19.556 – Outdoor Lighting

The purpose of this Chapter is to set standards to ensure that outdoor lighting is adequate for safety, security, and commerce while preserving the naturally dark night sky by mitigating artificial sky glow and preventing glare and light trespass.

Lighting zones are defined as follows:

- 1. Lighting Zone 0 (Zero) shall include undeveloped areas of parks, recreation areas, and wildlife preserves. These areas are undeveloped or intended to be preserved in a natural state that require little or no exterior light at night.
- 2. Lighting Zone 1 (One), shall include developed portions of parks, recreation areas, wildlife preserves, and the area within the Mt. Palomar Observatory boundary as shown in the General Plan which are suitable for low levels of exterior lighting at night.
- 3. Lighting Zone 2 (Two) shall include all areas of the City that are zoned RA-5, RC and RR which are suitable for modest levels of exterior lighting at night.
- 4. Lighting Zone 3 (Three) shall include all other areas of the City not in Lighting Zones 0, 1 or 2 which are suitable for medium to high levels of exterior lighting at night.

Based on these definitions, the project site is within Lighting Zone 3.

As indicated in Section 19.556.080, Design and Development Standards, of the Riverside Municipal Code, all outdoor lighting shall be designed and implemented to mitigate light trespass onto adjacent properties and comply with the standards listed in Table 5.1-1, *Lighting Limits for Nonresidential and Multifamily Residential Properties with More than Eight Units.*

Table 5.1-1Lighting Limits for Nonresidential and Multifamily Residential Properties with More than
Eight Units

Restriction	Lighting Zone 0 (Zero)	Lighting Zone 1 (One)	Lighting Zone 2 (Two)	Lighting Zone 3 (Three)	
Maximum Allowed Lighting Watts	Per Title 24 Part 6 Section 140.7				
Automatic Lighting Controls	Per Title 24 Part 6 Section 130.2 for nonresidential properties and for multifamily residential p residences or more.				
Backlight, uplight and glare limits	nits BUG 0,0,0 only Per Title 24 Part 11 S			art 11 Section 5.106.8	
Unshielded and decorative lighting	Prohibited	Prohibited	Maximum 600 lumens per luminaire, not to exceed 12000 lumens per acre.	Maximum 900 lumens per luminaire, not to exceed 18000 lumens per acre	
Maximum mounting height of luminaires (above adjacent grade)	8 feet	25 feet			

Eight Uhit	5			
Restriction	Lighting Zone 0 (Zero)	Lighting Zone 1 (One)	Lighting Zone 2 (Two)	Lighting Zone 3 (Three)
Landscape lighting per luminaire	Prohibited	Downlight only, not to exceed 450 lumens	Downlight and/or shielded uplight, not to exceed 600 lumens	Downlight and/or shielded uplight not to exceed 900 lumens
Maximum landscape lighting lumens per acre	0	9000	12000	18000
Architectural Floodlighting ¹	Prohibited	Prohibited	20000 lumens above horizontal plane of light source	20000 lumens above horizontal plane of light source
Maximum allowable light trespass ²	0	0.1 footcandle (1 lux)	0.2 footcandle (2 lux)	0.5 footcandle (5 lux)

Table 5.1-1	Lighting Limits for Nonresidential and Multifamily Residential Properties with More than
	Eight Units

Source: Riverside 2024 (Table 19.556.080 B, Lighting Limits for Nonresidential and Multifamily Residential Properties with Eight Units or More)

¹ Lumens represent maximum lumens per site development. Architectural floodlighting must comply with unshielded and decorative lighting restrictions, including maximum number of luminaires and lumens per residence.

² Allowable light trespass shall be determined based upon the light zone in which the trespass occurs, not from which the light originates.

Chapter 19.590 – Performance Standards

The purpose of this chapter is to describe certain characteristics associated with the design and operation of development that have the potential to create negative impacts on surrounding uses. Provisions herein identify the potential nuisance, establish thresholds for compliance, and explain the intent of development and operational standards to reduce potential impacts. According to Section 19.590.070, Light and Glare, of the Riverside Municipal Code, except for stadium and playing field lighting, lighting support structures shall not exceed the maximum permitted building height of the zone where such lights are located. Furthermore, the height of any lighting shall be the minimum required to accomplish the purpose of the light. Freestanding pole lights shall not exceed a maximum height of 14 feet within 50 feet of a residentially zoned property or residential use.

5.1.1.2 EXISTING CONDITIONS

Visual Character

The project site is fully developed and consists of a track and field, a parking lot, and tennis courts. The campus is bordered by La Sierra Avenue to the west; by residential uses, Collett Park, and Collett Elementary School to the north; by residential uses to the east and south. The campus does not contain any unique visual features that would distinguish it from the surrounding areas.

Landform

The campus and the immediate vicinity are predominantly flat. There are hillsides and ridgelines to the north, west, south, and east of the campus. Views of these ridgelines and hillsides are partially obstructed by trees, residential uses, and power poles. According to the United States Geological Survey, the project site's elevation is approximately 709 feet above mean sea level (USGS 2024).

Scenic Vistas and Corridors

According to the Caltrans State Scenic Highways Map, the campus is not near or adjacent to a State Scenic Highway. The nearest Eligible State Scenic Highway is State Route 91 (SR-91) near its intersection with Interstate 15 (I-15), approximately 4.3 miles west of the campus. The nearest Designated State Scenic Highway is SR-91 in the Anaheim Hills area, approximately 17 miles west of the campus (Caltrans 2019).

According to the Open Space and Conservation Element of the Riverside General Plan, the City's scenic resources include the hillside and ridgelines, vista points, and scenic viewpoints that allow for views of the City. The Riverside General Plan identifies the peaks of Box Springs Mountain, Mount Rubidoux, Arlington Mountain, Alessandro Heights, and the La Sierra/Norco Hills, as well as Sycamore Canyon Wilderness and Box Springs Park as scenic vista points; the nearest vista point to the project site is the La Sierra/Norco Hills and is approximately 1.6 miles northwest of the project site (Riverside 2012).

The City of Riverside Circulation and Community Element designates certain streets throughout the City as scenic boulevards. These scenic boulevards require special landscaping and additional right-of-way may be required. La Sierra Avenue is designated as a scenic boulevard (Riverside 2018). Additionally, the City's Land Use and Urban Design Element designates La Sierra Avenue as a parkway. Parkways in the City provide a linkage between the City's neighborhoods and are recognized as distinctive elements of the City's circulation network.

Light and Glare

The project site and its immediate vicinity contain existing sources of light and illumination. There are no field lights currently installed at the project site. Off-site and campus existing sources of light consist of street lighting, exterior lighting, parking lot lighting, lighting around the baseball fields, and security lighting.

Existing Views

The existing visual character of the project site is of a school campus. The campus consists of classroom and administration buildings, parking lots, and athletic facilities. The campus can be seen from La Sierra Avenue as well as from the residences bordering the project site to the north, south, and east. Views from private residences are not protected views under CEQA.

5.1.2 Thresholds of Significance

Appendix G of the CEQA Guidelines states that, "except as provided in Public Resources Code Section 21099," a project would normally have a significant effect on the environment if the project would:

- AE-1 Have a substantial adverse effect on a scenic vista.
- AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

- AE-3 In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.
- AE-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

5.1.3 Environmental Impacts

5.1.3.1 METHODOLOGY

Nighttime illumination and glare impacts are the effects of a project's exterior lighting upon adjoining uses and areas. Light and glare impacts are determined through a comparison of the existing light sources with the proposed lighting plan or policies. In some cases, excessive light and glare can be annoying to residents or other sensitive land uses; be disorienting or dangerous to drivers; impair the character of rural communities; and/or adversely affect wildlife.

Nighttime illumination and glare analysis address the effects of a project's nighttime lighting on adjoining uses and areas. Light and glare impacts are determined through a comparison of the existing light sources with the proposed lighting plan or policies. If the project has the potential to generate spill light on adjacent sensitive receptors or generate glare at receptors in the vicinity of the project site, mitigation measures can be provided to reduce potential impacts, as necessary. The following provides relevant lighting assessment terminology used in this analysis.

• Foot-candle. The unit of measure expressing the quantity of light on a surface. One foot-candle is the illuminance produced by a candle on a surface of one square foot from a distance of one foot. The general benchmarks for light levels are shown in Table 5.1-2, *General Light Levels Benchmark*.

Outdoor Light	Foot-Candles
Direct Sunlight	10,000
Full Daylight	1,000
Overcast Day	100
Very Dark Day	10
Twilight	1
Deep Twilight	0.1
Full Moon	0.01
Quarter Moon	0.001
Starlight	0.0001
Overcast Night	0.00001
Source: HSI 2019	

 Table 5.1-2
 General Light Levels Benchmark

- Horizontal foot-candle. The amount of light received on a horizontal surface such as a roadway or parking lot pavement.
- Vertical foot-candle. The amount of light received on a vertical surface such as a billboard or building façade.
- Lumen. A unit of measure for quantifying the amount of light energy emitted by a light source. In other words, foot-candles measure the brightness of the light at the illuminated object, and lumens measure the amount of light radiated by the light source.
- Luminaire ("light fixture"). The complete lighting unit (fixture) consists of a lamp—or lamps and ballast(s)—and the parts that distribute the light (reflector, lens, diffuser), position and protect the lamps, and connect the lamps to the power supply. An important component of luminaires is their shielding:
 - *Fully shielded.* A luminaire emitting no light above the horizontal plane.
 - *Shielded.* A luminaire emitting less than 2 percent of its light above the horizontal plane.
 - *Partly shielded.* A luminaire emitting less than 10 percent of its light above the horizontal plane.
 - **Unshielded.** A luminaire that may emit light in any direction.
- **Spill light.** Light from a lighting installation that falls outside the boundaries of the property for which it is intended.
- Light trespass. Spill light that, because of quantitative, directional, or type of light, causes annoyance, discomfort, or loss in visual performance and visibility. Light trespass is light cast where it is not wanted or needed, such as light from a streetlight or a floodlight that illuminates someone's bedroom at night, making it difficult to sleep. As a general rule, taller poles allow fixtures to be aimed more directly on the playing surface, which reduces the amount of light spilling into surrounding areas. Proper fixture angles ensure even light distribution across the playing area and reduce spill light. See Figure 5.1-1, *Light Trespass and Glare*, adapted from Institution of Lighting Engineers (ILE 2003).
- Glare. Light that causes visual discomfort or disability or a loss of visual performance when a bright object appears against a dark background. Glare can be generated by building-exterior materials, surface-paving materials, vehicles traveling or parked on roads and driveways, and stadium lights. Any highly reflective façade material is a concern because buildings can reflect bright sunrays. The concepts of spill light, direct glare, and light trespass are illustrated in Figure 5.1-1, *Light Trespass and Glare* (ILE 2003).



Figure 5.1-1 Light Trespass and Glare

Light trespass varies according to surrounding environmental characteristics. Areas that are more rural in character are more susceptible to impacts resulting from the installation of new artificial lighting sources, whereas urbanized areas are characterized by a large number of existing artificial lighting sources and are less susceptible to adverse effects associated with new artificial lighting sources. Therefore, lighting standards vary according to the amount and intensity of existing light sources in the area. To determine appropriate lighting standards that reflect the existing lighting conditions, land uses are categorized into five lighting zones and were developed by the International Commission on Illumination (CIE) (DarkSky 2024):

- LZ0: No ambient lighting. Areas where the natural environment will be seriously and adversely affected by lighting. Impacts include disturbing the biological cycles of flora and fauna and/or detracting from human enjoyment and appreciation of the natural environment. Human activity is subordinate in importance to nature. The vision of human residents and users is adapted to total darkness, and they expect to see little or no lighting. When not needed, lighting should be extinguished.
- LZ1: Low ambient lighting. Areas where lighting might adversely affect flora and fauna or disturb the character of the area. The vision of human residents and users is adapted to low light levels. Lighting may be used for safety and convenience, but it is not necessarily uniform or continuous. After curfew, most lighting should be extinguished or reduced as activity levels decline.
- LZ2: Moderate ambient lighting. Areas of human activity where the vision of human residents and users is adapted to moderate light levels. Lighting may typically be used for safety and convenience, but it is not necessarily uniform or continuous. After curfew, lighting may be extinguished or reduced as activity levels decline.

- LZ3: Moderately high ambient lighting. Areas of human activity where the vision of human residents and users is adapted to moderately high light levels. Lighting is generally desired for safety, security, and/or convenience, and it is often uniform and/or continuous. After curfew, lighting may be extinguished or reduced in most areas as activity levels decline.
- LZ4: High ambient lighting. Areas of human activity where the vision of human residents and users is adapted to high light levels. Lighting is generally considered necessary for safety, security, and/or convenience.

Based on the CIE lighting zones definitions, the project site and surrounding community would be classified as LZ3.

5.1.3.2 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.1-1:	The proposed project would	d not have a	a substantial	effect on a	scenic vist	a. [Threshold
	AE-1]					

Scenic vistas are panoramic views of features such as mountains, forests, the ocean, or urban skylines. The City of Riverside consists of scenic views of the surrounding hills and mountains. These include the peaks of Box Springs Mountain, Mount Rubidoux, Arlington Mountain, Alessandro Heights, and the La Sierra/Norco Hills, as well as Sycamore Canyon Wilderness and Box Springs Park. The nearest scenic vista point to the project site is the La Sierra/Norco Hills and is approximately 1.6 miles northwest of the project site.

The General Plan also aims to minimize the extent of urban development in the hillsides and recognizes ridgelines, hillsides, and arroyos as significant natural and visual resources (Riverside 2012). The proposed project would be developed within the boundaries of the La Sierra HS campus, which is in an urbanized neighborhood, and therefore would not impact hillsides or other significant visual resources.

Views of the hillsides and ridgelines can be seen in all directions of the project site from the street level. However, existing development, such as powerlines, houses, streetlight, and landscaping partially obstruct these views. The proposed 90-foot light poles would be visible from all directions and would be most prominent along La Sierra Avenue and Arrowwood Drive. However, views of the hillsides are currently partially obstructed by intervening development and trees. The four proposed light poles would be consistent with the existing vertical elements typical of an urban area, such as streetlights, power lines, trees, and school buildings, and would not significantly impact any scenic vistas. Because the La Sierra HS is in an urbanized area and there are no scenic resources near the campus, the proposed project would not degrade views of any scenic resources. Additionally, because the campus is already developed with school uses, including the project site, the proposed light poles, which would be the tallest structures on the project site, would not result in a substantial effect on scenic resources. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant impact.

Impact 5.1-2: The proposed project would not alter scenic resources within a state scenic highway. [Threshold AE-2]

The project site is not within a state scenic highway. The nearest Eligible State Scenic Highway is SR-91 near its intersection with I-15 and approximately 4.3 miles west of the campus. The nearest Designated State Scenic Highway is SR-91 in the Anaheim Hills area, approximately 17 miles west of the campus (Caltrans 2019). Due to the distance, varying topography, and intervening development, the campus is not visible from scenic routes within a state scenic highway. Therefore, the proposed project would not result in any impacts to a state scenic highway.

According to the City of Riverside's General Plan, La Sierra Avenue is designated a scenic boulevard and a parkway, which require landscaping and pedestrian, bicyclists, and driver amenities to be developed. The proposed project would not include any construction on La Sierra Avenue or in the street right-of-way. Therefore, the proposed project would not result in any impacts to a City-designated scenic corridor.

Level of Significance Before Mitigation: Less than significant impact.

Impact 5.1-3: The proposed project would not substantially degrade the existing visual character or quality of public views and would not conflict with applicable zoning and other regulations governing scenic quality. [Threshold AE-3]

As identified stated in Chapter 3, *Project Description*, the proposed project would entail the renovation of the existing track and field; addition of field lighting, public address (PA) system, scoreboard, and bleachers to accommodate 2,800 spectators; construction of a 5,500-square-foot field house that would include restrooms, ticket office, storage, concessions stand, and team room; and repaving and restriping the 134,000-square-foot parking lot (see Figure 3-4, *Conceptual Site Plan*). The proposed project would relocate the existing tennis courts (59,677 square feet) by approximately 10 feet (south). The proposed project would reduce the number of parking spaces by 63 parking stalls. The proposed project would not impact student or staff capacity at La Sierra HS.

The four proposed 90-foot light poles would be visible from all directions, and most prominent from La Sierra Avenue and Arrowwood Drive. While Section 19.590.070, Light and Glare, of the City of Riverside Municipal Code indicates that a freestanding light pole shall not exceed a maximum height of 14 feet within 50 feet of a residentially zoned property or residential use, this standard does not apply to stadium or playfield lighting. Therefore, the proposed project would not conflict with the City's Municipal Code in this regard.

As the project site is already developed with sports facilities, the proposed project would have a similar use in the same location, and therefore would not result in a substantial change in the visual character of the site and surrounding area. While the heights of the proposed light poles would be 90 feet tall, stadium and playfield lights are not required to meet the City's light pole height standard. In addition, given the urbanized nature of the project area and the intervening development and landscaping, the proposed lights would not substantially block views of the surrounding hills and would be consistent with the vertical elements in the project area. As such, impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant impact.

Impact 5.1-4: The proposed project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. [Threshold AE-4]

According to the City of Riverside's Municipal Code, Section 19.556.060, Lighting Zones, the project site is in Lighting Zone 3, which is an area suitable for medium to high levels of exterior lighting at night. Section 19.556.080, Design and Development Standards, of the City's Municipal Code limits the number of foot-candles (fc) allowed in each of the Lighting Zones. For Lighting Zone 3, the maximum allowable light trespass is 0.5 fc.

Lighting Spill Impacts

The proposed project would install stadium lights on the northern and southern sides of the proposed track and field, as shown on Figure 5.1-2, *Spill Light at Residential Facades*. Each lighting pole would be 90 feet in height. Two poles would be to the west and east of the visitor bleachers, south of residential uses to the north of the project, and two poles would be located to the west and east of the home bleachers. The total number of luminaries would be 60 and have a total load of 67.14 kilowatts (kW). Additionally, the average light level would be 0.23 fc with a minimum of 0 fc and a maximum of 1 fc for the maintained maximum vertical footcandles (see Figure 5.1-2).

It is not possible to completely eliminate spillover of light and glare onto the adjacent properties, but the proposed pole height allows the best control for focusing the lights to minimize spillover light. Higher mounting heights are generally more effective in controlling spill light because a more controlled and/or narrower beam may be used, making it easier to confine the light to the designated area. Lower mounting heights increase the spill light beyond the property boundaries, and make bright parts of the flood lights more visible from positions outside the property boundary, which can increase glare.

As shown on Figure 5.1-2, spill light at the residential facades of the residences to the north, along Arrowwood Drive, would reach a maximum of 0.73 fc. The proposed project's lights would only be used for practices, games, and special events; lights would shut off at 10:30 pm, with the exception of special events. However, because light levels would exceed the City's threshold of 0.5 fc, spill light impacts are considered potentially significant.

Generation of Glare

The proposed project would install four light poles within the project site. Design elements for glare control may include shielding, adding security lights lower on the poles, landscaping, etc. As part of the proposed project, the lighting engineer that installs the lights would ensure that the lights are properly adjusted and maintained so that glare would not impact the surrounding community. In general, use of the field would end by 10:30 pm, with the exception of special events that would occur one to two times per year. However, because light spillover would exceed the significance threshold of 0.5 fc, impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially significant.



Project Site Boundary

Source: MUSCO 2024; Nearmap 2024.

5. Environmental Analysis

Figure 5.1-2 - Spill Light Levels at Residential Facades

nt List for Areas Shown							
POLE LUMINARIES							
TION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
F2	90'	-	90'	TLC-LED-1200	1	1	0
			90'	TLC-LED-1500	7	7	0
			90'	TLC-LED-900	3	3	0
			80'	TLC-RGBW	2	2	0
			70'	TLC-LED-550	2	0	2
			15.5'	TLC-BT-575	2	2	0
F4	90'	-	90'	TLC-LED-1200	2	2	0
			90'	TLC-LED-1500	9	9	0
			80'	TLC-RGBW	2	2	0
			70'	TLC-LED-550	2	0	2
			20'	TLC-BT-575	2	2	0
			TOTALS		68	60	8

*Above grade level relative to the field

mary	
Name	Spill at Back of Houses
Spacing	30.0' x 10.0'
Height	15.0' above grade
on Summa	ıry
	MAINTAINED MAX VERTICAL FOOTCANDLES
	Entire Grid
Scan Average	0.23
Maximum	0.73
Minimum	0.00
Avg/Min	39.82
Max/Min	125.60
G (adjacent pts)	0.00
CU	0.00
No. of Points	30
INFORMATION	
Applied Circuits	A,B,C
o. of Luminaires	60
Total Load	67.14 kW



0



5.1.4 Cumulative Impacts

Development projects' consistency with applicable plans and policies would be separately reviewed by the applicable lead agency. If needed, the lead agency would require appropriate mitigation measures for each development project to reduce identified impacts. The District plans to renovate the track and field at La Sierra HS and add field lighting. While aesthetic impacts are typically site-specific, impacts of light and glare could combine with other projects in the surrounding area to create a cumulative impact. As light and glare impacts of the proposed project are considered significant, impacts would also be cumulatively significant.

5.1.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.1-1, 5.1-2, and 5.1-3.

Without mitigation, these impacts would be **potentially significant**:

• Impact 5.1-4 The proposed project would result in new sources of substantial light and glare.

5.1.6 Mitigation Measures

Impact 5.1-4

- AE-1 The Alvord Unified School District shall soften the visual impact of the existing boundary wall and proposed bleachers, as well as provide light shielding, by installing columnar evergreen tree species with minimal fruit, flower, and leaf litter (such as Cupressus or Thuja) on the District's side of the wall. The trees shall be spaced to achieve canopy-to-canopy coverage within three years and shall reach a minimum height of 15 feet.
- AE-2 Following the installation of the field lights, the Alvord Unified School District shall take light measurements to confirm which residences are impacted by light levels exceeding 0.5 foot-candles at the building facade. Once confirmed, these residences will be eligible for compensation for window treatments designed to reduce interior light levels (initially determined to be 10916, 10920, 10928, and 10932 Arrowwood Drive; however, applicable residences shall be determined once the final lighting plans have been prepared).
- AE-3 Six months prior to holding the first spectator event, impacted homeowners along Arrowwood Drive shall document (e.g., videos, photographs, etc.) the need for additional spillover light blocking mechanisms (e.g., shutters, blinds, etc.); have a licensed contractor provide an estimate for installing blinds, shutters, etc.; and provide the cost estimate to the District for their review. Upon operations of the lighting, light measurements (see Mitigation Measure AE-2) shall be taken at each impacted window to determine if light levels will exceed 0.5 foot-candles, and only windows that are exposed to light levels that exceed 0.5 foot-candles shall be accounted for in the cost estimates. Payments shall be made at least three months prior to the first lighting of the field. A homeowner's refusal to accept

payment shall not be considered the District's failure to accomplish this mitigation payment. The District shall pay an amount of up to \$4,000 per impacted house for mitigation at the time project improvements are proposed.

AE-4 The Alvord Unified School District shall program the lighting control system to restrict any activities to no later than 10:30 pm, with the exception of special events that occur periodically throughout the year (e.g., homecoming, graduation).

5.1.7 Level of Significance After Mitigation

Impact 5.1-4

Implementation of Mitigation Measures AE-1 would soften the visual impact and providing light shielding by installing landscaping, Mitigation Measure AE-2 would identify eligible residences for window treatments designed to reduce interior light levels, Mitigation Measure AE-3 would provide funding for mechanisms to block spill light to homeowners of impacted residences, and Mitigation Measure AE-4 would restrict lighting to no later than 10:30 pm with the exception of special events. While the implementation of these mitigation measures may reduce impacts, given the substantial increase in light levels, impacts are considered *significant and unavoidable*.

5.1.8 References

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5. Environmental Analysis

5.2 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the track and field improvements (proposed project) at the La Sierra High School (La Sierra HS) to impact air quality in a local and regional context. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. In this section, "emissions" refers to the actual quantity of pollutant, measured in pounds per day (lbs/day), and "concentrations" refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter (μ g/m³).

Criteria air pollutant emissions modeling is included in Appendix 5.2-1, *Air Quality and Greenhouse Gas Emissions Modeling Data*, of this DEIR. Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB).

This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators; constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1 which would include renovating the track and field; and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

5.2.1 Environmental Setting

- AAQS. Ambient Air Quality Standards
- **CES.** CalEnviroScreen. CES is a mapping tool that helps identify the California communities most affected by sources of pollution and where people are often especially vulnerable to pollution's effects.
- **Concentrations.** Refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter (µg/m³).
- **Criteria Air Pollutants.** Those air pollutants specifically identified for control under the Federal Clean Air Act (currently seven—carbon monoxide, nitrogen oxides, lead, sulfur oxides, ozone, and coarse and fine particulates).
- **DPM.** Diesel particulate matter.
- Emissions. Refers to the actual quantity of pollutant, measured in pounds per day or tons per year.
- **MER.** Maximally exposed receptor.

- **ppm.** Parts per million.
- Sensitive receptor. Land uses that are considered more sensitive to air pollution than others due to the types of population groups or activities involved. These land uses include residential, retirement facilities, hospitals, and schools.
- **TAC.** Toxic air contaminant.
- **μg/m³.** Micrograms per cubic meter.
- **VMT.** Vehicle miles traveled.

5.2.1.1 AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_X), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. Of these, CO, SO₂, PM₁₀, and PM_{2.5} are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. Nitrogen dioxide (NO₂) and ozone (O₃) are also criteria air pollutants with corresponding AAQS. VOC and NO_X are ozone pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. O₃ and NO₂ are the principal secondary pollutants.

Each of the primary and secondary criteria air pollutants and its known health effects are described below.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (South Coast AQMD 2005, EPA 2024a). The SoCAB is designated as being in attainment under the California AAQS and attainment (serious maintenance) under the National AAQS (CARB 2024a).

Nitrogen Oxides (NO_X) are a byproduct of fuel combustion and contribute to the formation of O_3 , PM_{10} , and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO₂). The principal form of NO_2 produced by combustion is NO, but NO reacts with oxygen to form NO_2 , creating the mixture of NO and NO_2 commonly called NO_X . NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO_2 exposure

concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO₂ exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO₂ concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (South Coast AQMD 2005; EPA 2024a). On February 21, 2019, the California Air Resources Board (CARB) approved the separation of the area that runs along the State Route 60 corridor through portions of Riverside, San Bernardino, and Los Angeles counties from the remainder of the SoCAB for state nonattainment designation purposes. The board designated this corridor as nonattainment. The remainder of the SoCAB is designated in attainment (maintenance) under the National AAQS and attainment under the California AAQS (CARB 2024a).

Sulfur Dioxide (SO₂) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO₂. When sulfur dioxide forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO₂, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (South Coast AQMD 2005; EPA 2024a). The SoCAB is designated as attainment under the California and National AAQS (CARB 2024a).

Suspended Particulate Matter (PM₁₀ and PM_{2.5}) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (South Coast AQMD 2005).

The US Environmental Protection Agency's (EPA) scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals

with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms (South Coast AQMD 2005). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤ 0.0001 millimeter) have human health implications because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2013). However, the EPA and CARB have not adopted AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1999). Particulate matter can also cause environmental effects such as visibility impairment, environmental damage, and aesthetic damage (South Coast AQMD 2005; EPA 2024a). The SoCAB is a nonattainment area for PM_{2.5} under California and National AAQS and a nonattainment area for PM₁₀ under the California AAQS (CARB 2024a).

Ozone (O₃) is a key ingredient of "smog" and is a gas that is formed when VOCs and NO_x, both byproducts of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O₃ is a secondary criteria air pollutant. O₃ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O₃ can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O₃ also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O₃ also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O₃ harms sensitive vegetation during the growing season (South Coast AQMD 2005; EPA 2024a). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2024a).

Volatile Organic Compounds (VOC) are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (South Coast AQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O₃, South Coast AQMD has established a significance threshold.

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005; EPA 2024a). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft

operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted stricter lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.¹ As a result of these violations, the Los Angeles County portion of the SoCAB is designated nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2024a). There are no lead-emitting sources associated with this project, and therefore, lead is not a pollutant of concern for the proposed project.

Table 5.2-1, Criteria Air Pollutant Health Effects Summary, summarizes the potential health effects associated with the criteria air pollutants.

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	 Chest pain in heart patients Headaches, nausea Reduced mental alertness Death at very high levels 	Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O ₃)	 Cough, chest tightness Difficulty taking a deep breath Worsened asthma symptoms Lung inflammation 	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO2)	Increased response to allergensAggravation of respiratory illness	Same as carbon monoxide sources
Particulate Matter (PM_{10} and $PM_{2.5}$)	 Hospitalizations for worsened heart diseases Emergency room visits for asthma Premature death 	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO ₂)	 Aggravation of respiratory disease (e.g., asthma and emphysema) Reduced lung function 	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	 Behavioral and learning disabilities in children Nervous system impairment 	Contaminated soil
Source: CARB 2024c; South Co	ast AQMD 2005, 2022.	

 Table 5.2-1
 Criteria Air Pollutant Health Effects Summary

Toxic Air Contaminants

People exposed to toxic air contaminants (TAC) at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems (EPA 2024b). By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has

¹ Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (South Coast AQMD 2012).

implemented control measures for a number of compounds that pose high risks and show potential for effective control. There are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most relevant to the proposed project being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified diesel particulate matter (DPM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. Long-term (chronic) inhalation of DPM is likely a lung cancer risk. Short-term (i.e., acute) exposure can cause irritation and inflammatory symptoms and may exacerbate existing allergies and asthma symptoms (EPA 2002).

5.2.1.1 REGULATORY BACKGROUND

Ambient air quality standards have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of TACs. The proposed project is in the SoCAB and is subject to the rules and regulations imposed by the South Coast AQMD as well as the California AAQS adopted by CARB and National AAQS adopted by the EPA. Federal, state, and regional laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized in this section.

Federal and State Regulations

Ambient Air Quality Standards

The Clean Air Act was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

These National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 5.2-2, *Ambient Air Quality Standards for Criteria Pollutants*, these pollutants are O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and Pb. In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
Ozone (O ₃) ³	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered
(00)	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO ₂) ⁵	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate	Annual Arithmetic Mean	20 µg/m ³	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric
(PM ₁₀)	24 hours	50 µg/m³	150 µg/m³	raised dust and ocean sprays).
Respirable Fine Particulate	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric
(PM _{2.5}) ⁴	24 hours	*	35 µg/m³	raised dust and ocean sprays).
Lead (Pb)	30-Day Average	1.5 µg/m³	*	Present source: lead smelters, battery manufacturing &
	Calendar Quarter	*	1.5 µg/m³	gasoline.
	Rolling 3-Month Average	*	0.15 µg/m³	
Sulfates (SO ₄)	24 hours	25 µg/m³	*	Industrial processes.

Table 5.2-2	Ambient Air Quality	v Standards for Cr	iteria Pollutants
		,	

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	*	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	*	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	*	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Table 5.2-2 Ambient Air Quality Standards for Criteria Pollutants

Source: CARB 2016.

Notes: ppm: parts per million; µg/m3: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

¹ California standards for O3, CO (except 8-hour Lake Tahoe), SO2 (1 and 24 hour), NO2, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

² National standards (other than O3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

³ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

⁴ On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions.

- Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards. Pavley I is a clean-car standard that reduces greenhouse gas (GHG) emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.
- Heavy-Duty (Tractor-Trailer) GHG Regulation. The tractors and trailers subject to this regulation must either use EPA SmartWay-certified tractors and trailers or retrofit their existing fleet with SmartWay-verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that

pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay-verified low-rolling-resistance tires. There are also requirements for trailers to have low-rolling-resistance tires and aerodynamic devices.

- California Code of Regulations (CCR) Title 20: Appliance Energy Efficiency Standards. The 2006 Appliance Efficiency Regulations (20 CCR sections 1601–1608) were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances.
- 24 CCR, Part 6: Building and Energy Efficiency Standards. Energy conservation standards for new
 residential and nonresidential buildings adopted by the California Energy Resources Conservation and
 Development Commission (now the California Energy Commission) in June 1977.
- 24 CCR, Part 11: Green Building Standards Code. Establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.²

Tanner Air Toxics Act and Air Toxics Hot Spot Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and reduce exposure to them. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health" (17 CCR sec. 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code sec. 7412[b]) is a TAC. Under state law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate "toxics best available control technology" to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

² The green building standards became mandatory in the 2010 edition of the code.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- I3 CCR Chapter 10 Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. Generally restricts on-road diesel-powered commercial motor vehicles with a gross vehicle weight rating of greater than 10,000 pounds from idling more than five minutes.
- 13 CCR Chapter 10 Section 2480: Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools. Generally restricts a school bus or transit bus from idling for more than five minutes when within 100 feet of a school.
- 13 CCR Section 2477 and Article 8: Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate. Regulations established to control emissions associated with diesel-powered TRUs.

Regional Regulations

Air Quality Management Planning

The South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). The AQMP is a regional strategy plan to achieve air quality standards by examining emissions, looking at regional growth projections, and the impact of existing and proposed control measures to provide healthful air in the long-term. Since 1979, a number of AQMPs have been prepared.

The Clean Air Act requires CARB to develop a State Implementation Plan (SIP) that describes how an area will attain national AAQS. The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for a particular pollutant depending on whether they meet the AAQSs.

2022 AQMP

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, as an update to the 2017 AQMP. On October 1, 2015, the EPA strengthened the National AAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb) (2015 Ozone National AAQS.). The SoCAB is currently classified as an "extreme" nonattainment for the 2015 Ozone National AAQS. Meeting the 2015 federal ozone standard requires reducing NO_X emissions, the key pollutant that creates ozone, by 67 percent more than is required by adopted rules and regulations in 2037. The only way to achieve the required NO_X

reductions is through extensive use of zero emission (ZE) technologies across all stationary and mobile sources. South Coast AQMD's primary authority is over stationary sources which account for approximately 20 percent of NO_x emissions. The overwhelming majority of NO_x emissions are from heavy-duty trucks, ships and other State and federally regulated mobile sources that are mostly beyond the South Coast AQMD's control. The region will not meet the standard absent significant federal action. In addition to federal action, the 2022 AQMP requires substantial reliance on future deployment of advanced technologies to meet the standard. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available ZE and low-NO_x technologies and (2) developing new ZE and ultra-low NO_x technologies for use in cases where the technology is not currently available. South Coast AQMD is prioritizing distribution of incentive funding in Environmental Justice areas and seeking opportunities to focus benefits on the most disadvantaged communities (South Coast AQMD 2022).

South Coast AQMD PM25 Redesignation Request and Maintenance Plan

In 1997, the EPA adopted the 24-hour fine PM_{2.5} standard of 65 μ g/m³. In 2006, this standard was lowered to a more health-protective level of 35 μ g/m³. The SoCAB is designated nonattainment for both the 65 μ g/m³ and 35 μ g/m³ 24-hour PM_{2.5} standards (24-hour PM_{2.5} standards). In 2020, monitored data demonstrated that the SoCAB attained both 24-hour PM_{2.5} standards. The South Coast AQMD has developed the "2021 Redesignation Request and Maintenance Plan" for the 1997 and 2006 24-hour PM_{2.5} Standards for the SoCAB PM_{2.5} Redesignation Request and Maintenance Plan, demonstrating that the SoCAB has met the requirements to be redesignated to attainment for the 24-hour PM_{2.5} standards (South Coast AQMD 2021b).

AB 617, Community Air Protection Program

AB 617 (C. Garcia, Chapter 136, Statutes of 2017) requires local air districts to monitor and implement air pollution control strategies that reduce localized air pollution in communities that bear the greatest burdens. In response to AB 617, CARB has established the Community Air Protection Program.

Air districts are required to host workshops to help identify disadvantaged communities that are disproportionately affected by poor air quality. Once the criteria for identifying the highest priority locations have been identified and the communities have been selected, new community monitoring systems would be installed to track and monitor community-specific air pollution goals. In 2018 CARB prepared an air monitoring plan, the Community Air Protection Blueprint (Blueprint) that evaluates the availability and effectiveness of air monitoring technologies and existing community air monitoring networks. Under AB 617, the Blueprint is required to be updated every five years.

Under AB 617, CARB is also required to prepare a statewide strategy to reduce TACs and criteria pollutants in impacted communities; provide a statewide clearinghouse for best available retrofit control technology; adopt new rules requiring the latest best available retrofit control technology for all criteria pollutants for which an area has not achieved attainment of California AAQS; and provide uniform, statewide reporting of

emissions inventories. Air districts are required to adopt a community emissions reduction program to achieve reductions for the communities impacted by air pollution that CARB identifies.

Lead Implementation Plan

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead (Pb) classification because of the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded the new standard in the 2007 to 2009 period. The remainder of the SoCAB outside the Los Angeles County nonattainment area remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the SIP revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval.

South Coast AQMD Rules and Regulations

All projects within the SoCAB are subject to South Coast AQMD rules and regulations in effect at the time of activity.

- Rule 401, Visible Emissions. This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark as or darker than designated No. 1 on the Ringelmann Chart, as published by the US Bureau of Mines.
- Rule 402, Nuisance. This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- Rule 403, Fugitive Dust. This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth-moving and grading activities.
- Rule 445, Wood Burning Devices. In general, the rule prohibits new developments from the installation of wood-burning devices. This rule is intended to reduce the emission of particulate matter from wood-burning devices and applies to manufacturers and sellers of wood-burning devices, commercial sellers of firewood, and property owners and tenants that operate a wood-burning device.

- Rule 1113, Architectural Coatings. This rule serves to limit the VOCs content of architectural coatings used on projects in the South Coast AQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the South Coast AQMD must comply with the current VOC standards set in this rule.
- Rule 1403, Asbestos Emissions from Demolition/Renovation Activities. The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

City of Riverside General Plan

The Air Quality Element of the City of Riverside General Plan includes the following policies related to air quality:

- 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-1.3. Separate, buffer and protect sensitive receptors from significant sources of pollution to the greatest extent possible.
- **Policy AQ-1.5.** Encourage infill development projects within urbanized areas, which include job centers and transportation nodes.
- **Policy AQ-1.16.** Design safe and efficient vehicular access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.
- **Policy AQ-1.18.** New residential subdivisions shall be designed to encourage "walkable" neighborhoods with pedestrian walkways and bicycle paths to facilitate pedestrian travel.
- Policy AQ-1.21. Cooperate and participate in regional air quality management plans, programs and enforcement measures.
- **Policy AQ-2.3.** Cooperate with local, regional, State and Federal jurisdictions to reduce vehicle miles traveled (VMT) and motor vehicle emissions through job creation in job poor areas.
- **Policy AQ-2.6.** Develop trip reduction plans that promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking.

- Policy AQ-2.18. Manage the City's transportation fleet fueling standards to achieve the best alternate fuel fleet mix possible.
- Policy AQ-2.25. Support the development of alternative fuel infrastructure that is publicly accessible.
- 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-4.5. Require the suspension of all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.
- 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-7.9. 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.

5.2.1.2 EXISTING CONDITIONS

South Coast Air Basin Meteorology

The project site lies in the SoCAB, which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain connected to broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (South Coast AQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the project site with temperature data is the Riverside Fire Station 3 (ID 047470). The lowest average temperature is reported at 39.1 °F in January, and the highest average temperature is 94.4°F in August (WRCC 2024).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from October through May. Summer rainfall is normally restricted to widely scattered

thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall historically averages 10.21 inches per year in the project area (WRCC 2024).

Humidity

Although the SoCAB has a semiarid climate, the air near the Earth's surface is typically moist because of a shallow marine layer. This "ocean effect" is dominant except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (South Coast AQMD 2005).

Wind

Wind patterns across the southern coastal region are characterized by westerly or southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB combined with other meteorological conditions can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east inhibit the eastward transport and diffusion of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (South Coast AQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height." The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (South Coast AQMD 2005).

SoCAB Nonattainment Areas

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the AAQS. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- **Unclassified.** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- *Attainment.* A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- *Nonattainment.* A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- **Nonattainment/Transitional.** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 5.2-3, Attainment Status of Criteria Air Pollutants in the South Coast Air Basin.

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM ₁₀	Serious Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment/Maintenance
SO ₂	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only) ¹
All others	Attainment/Unclassified	Attainment/Unclassified

Table 5.2-3	Attainment Status of Criteria Air Pollutants in the South Coast Air Basin
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Source: CARB 2024a.

¹ On February 21, 2019, CARB's board approved the separation of the area that runs along State Route 60 corridor through portions of Riverside, San Bernardino, and Los Angeles counties from the remainder of the SoCAB for State nonattainment designation purposes. The board designated this corridor as nonattainment. The remainder of the SoCAB remains in attainment for NO₂ (CARB 2019). CARB is proposing to redesignate SR-60 Near-Road Portion of San Bernardino, Riverside, and Los Angeles Counties in the SoCAB as attainment for NO₂ at the February 24, 2022, board hearing (CARB 2022a).

² The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal PM_{2.5} standards. The 2021 PM2.5 Redesignation Request and Maintenance Plan demonstrates that the South Coast meets the requirements of the CAA to allow the EPA to redesignate the SoCAB to attainment for the 65 µg/m³ and 35 µg/m³ 24-hour PM_{2.5} standards. CARB will submit the 2021 PM2.5 Redesignation Request to the US EPA as a revision to the California SIP (CARB 2021).
³ In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters.

Remaining areas in the SoCAB are unclassified.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the South Coast AQMD. The proposed project is located within Source Receptor Area (SRA) 23: Metropolitan Riverside.³ The air quality monitoring station closest to the project site is the Mira Loma Van Buren Monitoring Station, which is one of 31 monitoring stations

³ Per South Coast AQMD Rule 701, an SRA is defined as: "A source area is that area in which contaminants are discharged and a receptor area is that area in which the contaminants accumulate and are measured. Any of the areas can be a source area, a receptor area, or both a source and receptor area." There are 37 SRAs in the South Coast AQMD's jurisdiction.

South Coast AQMD operates and maintains within the SoCAB.⁴ Data from this station include O_3 , NO_2 , PM_{10} , and $PM_{2.5}$ and are summarized in Table 5.2-4, *Ambient Air Quality Monitoring Summary*. The data show that the area regularly exceeds the state and federal one-hour and eight-hour O_3 standards within the last five recorded years. Additionally, the area has regularly exceeded the state PM_{10} standards and federal $PM_{2.5}$ standards.

	Number of Days Thresholds Were Exceeded and Maximum Levels ¹		xceeded and
Pollutant/Standard	2020	2021	2022
Ozone (O ₃)	•	-	-
State 1-Hour \ge 0.09 ppm (days exceed threshold)	51	20	19
Federal 8-hour \geq 0.070 ppm (days exceed threshold)	89	53	57
Max. 1-Hour Conc. (ppm)	0.140	0.116	0.120
Max. 8-Hour Conc. (ppm)	0.117	0.094	0.094
Nitrogen Dioxide (NO ₂)			
State 1-Hour \ge 0.18 ppm (days exceed threshold)	0	0	0
Max. 1-Hour Conc. (ppm)	0.058	0.053	0.047
Coarse Particulates (PM10)			
State 24-Hour > 50 µg/m ³ (days exceed threshold)	16	15	11
Federal 24-Hour > 150 µg/m ³ (days exceed threshold)	1	0	0
Max. 24-Hour Conc. (µg/m ³)	162.5	98.7	81.6
Fine Particulates (PM _{2.5})			-
Federal 24-Hour > 35 µg/m ³ (days exceed threshold)	13	14	0
Max. 24-Hour Conc. (µg/m ³)	60.9	85.1	32.1
Source: CARB 2024b.			

Table 5.2-4 Ambient Air Quality Monitoring Summary

Notes: ppm = parts per million; ppb = parts per billion; µg/m3 = micrograms per cubic meter; * = Data not available

¹ Data obtained from the Mira Loma Van Buren Monitoring Station.

Multiple Air Toxics Exposure Study V

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on existing ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In April 2021, South Coast AQMD released the latest update to the MATES study, MATES V. The first MATES analysis began in 1986 but was limited because of the technology available at the time. Conducted in 1998, MATES II was the first MATES iteration to include a comprehensive monitoring program, an air toxics emissions inventory, and a modeling component. MATES III was conducted from 2004 to 2006, with MATES IV following from 2012 to 2013.

MATES V uses measurements taken during 2018 and 2019, with a comprehensive modeling analysis and emissions inventory based on 2018 data. The previous MATES studies quantified the cancer risks based on the inhalation pathway only. MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II

⁴ Locations of the SRAs and monitoring stations are shown here: http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf.

through IV measurements have been re-examined using current Office of Environmental Health Hazards Assessment and California Environmental Protection Agency risk assessment methodologies and modern statistical methods to examine the trends over time.

The MATES V study showed that cancer risk in the SoCAB decreased to 454 in a million from 997 in a million in the MATES IV study. Overall, air toxics cancer risk in the SoCAB decreased by 54 percent since 2012 when MATES IV was conducted. MATES V showed the highest risk locations near the Los Angeles International Airport and the Ports of Long Beach and Los Angeles. DPM continues to be the major contributor to air toxics cancer risk (approximately 72 percent of the total cancer risk). Goods movement and transportation corridors have the highest cancer risk. Transportation sources account for 88 percent of carcinogenic air toxics emissions, and the remainder is from stationary sources, which include large industrial operations such as refineries and power plants as well as smaller businesses such as gas stations and chromeplating facilities. (South Coast AQMD 2021).

Figure 5.2-1, South Coast AQMD MATES V Cancer Risk in the Project Area, identifies that the maximum cancer risk in the project area is 376 per million, which is higher than 25 percent of the South Coast AQMD population (South Coast AQMD 2024).

Existing Emissions

The existing high school operations currently generate criteria air pollutant emissions from area sources (e.g., use of landscaping equipment, maintenance activities such as architectural coating), energy use (i.e., natural gas used for heating), and mobile sources (i.e., student and staff trips to the campus).

Sensitive Receptors

Some land uses are considered more sensitive to air pollution (i.e., TACs) than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent because the majority of workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

The nearest off-site sensitive receptors are the single-family residences surrounding the campus in all directions, and Collett Park and Collett Elementary School to the north.

5. Environmental Analysis



Figure 5.2-1 - South Coast AQMD MATES V Cancer Risk in the Project Area

Source:

https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/ Main-Page/?views=Click-tabs-for-other-data%2CCancer-Risk



5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
- AQ-3 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

5.2.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

CEQA allows the significance criteria established by the applicable air quality management district or air pollution control district to be used to assess impacts of a project on air quality. South Coast AQMD has established thresholds of significance for air quality for construction activities and project operation in the SoCAB, as shown in Table 5.2-5, *South Coast AQMD Regional Significance Thresholds*. Table 5.2-5 lists thresholds that are applicable for all projects uniformly, regardless of size or scope. As previously discussed, there is growing evidence that although ultrafine particulate matter contributes a very small portion of the overall atmospheric mass concentration, it represents a greater proportion of the health risk from PM exposure. However, because the EPA and CARB have not adopted AAQS to regulate ultrafine particulate matter, South Coast AQMD has not developed thresholds for it.

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROG)	75 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Nitrogen Oxides (NO _X)	100 lbs/day	55 lbs/day
Sulfur Oxides (SOx)	150 lbs/day	150 lbs/day
Particulates (PM ₁₀)	150 lbs/day	150 lbs/day
Source: South Coast AQMD 2023.	-	· ·

 Table 5.2-5
 South Coast AQMD Regional Significance Thresholds

Health Outcomes Associated with the AQMD Regional Significance Thresholds

Projects that exceed the AQMD's regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health effects. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Increases cancer risk (PM_{2.5}, TACs)
- Aggravates respiratory disease (O₃, PM_{2.5})
- Increases bronchitis (O₃, PM_{2.5})
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O₃)
- Reduces resistance to infections and increases fatigue (O₃)
- Reduces lung growth in children (PM_{2.5})
- Contributes to heart disease and heart attacks (PM_{2.5})
- Contributes to premature death (O₃, PM_{2.5})
- Contributes to lower birth weight in newborns (PM_{2.5}) (South Coast AQMD 2015a)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists, in a landmark children's health study, found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015b).

South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB and has established thresholds that would be protective of these individuals. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS. Mass emissions thresholds shown in Table 5.2-5 are not correlated with concentrations of air pollutants, but mass emissions still contribute to the cumulative air quality impacts in the SoCAB. The thresholds are based on the trigger levels for the federal New Source Review Program, which was created to ensure projects are consistent with attainment of health-based federal AAQS. Regional emissions from a single project do not trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed previously. Projects that do not exceed the South Coast AQMD regional significance thresholds in Table 5.2-5 would not violate regional air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emission levels presented in Table 5.2-5, then those emissions would cumulatively contribute to the nonattainment status of the air basin and would contribute to elevating health effects associated with these criteria air pollutants regionally. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions in Table 5.2-5, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment because mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited previously.

South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health to address the issue raised in *Sierra Club v. County of Fresno* (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978. South Coast AQMD currently does not have methodologies that would provide the District with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions.⁵ Ozone concentrations are dependent on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, and the absence of modeling tools that could provide statistically valid data and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects, it is not possible to link specific health risks to the magnitude of emissions exceeding the significance thresholds. However, if a project in the SoCAB exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SoCAB.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to the AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction of cleaner fuels, as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for attainment by South Coast AQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.⁶ As identified in South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide, peak carbon monoxide concentrations in the SoCAB in years before the 2007 redesignation were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes

⁵ In April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 ("Friant Ranch") in the review and analysis of Proposed Projects under CEQA in Sacramento County. Consistent with the expert opinions submitted to the court in Friant Ranch by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and South Coast AQMD, the SMAQMD guidance confirms the absence of an acceptable or reliable quantitative methodology that would correlate the expected criteria air pollutant emissions of projects to likely health consequences for people from project-generated criteria air pollutant emissions. The SMAQMD guidance explains that while it is in the process of developing a methodology to assess these impacts, lead agencies should follow the Friant Court's advice to explain in meaningful detail why this analysis is not yet feasible. Since this interim memorandum SMAQMD has provided methodology to address health impacts. However, a similar analysis is not available for projects within the South Coast AQMD region.

⁶ The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—to generate a significant CO impact (BAAQMD 2023).⁷

Localized Significance Thresholds

South Coast AQMD identifies localized significance thresholds (LST), shown in Table 5.2-6, *South Coast AQMD Localized Significance Thresholds*. Emissions of NO₂, CO, PM_{10} , and $PM_{2.5}$ generated at a project site could expose sensitive receptors to substantial concentrations of criteria air pollutants. Off-site mobile-source emissions are not included in the LST analysis. A project would generate a significant impact if it generates emissions that, when added to the local background concentrations, violate the AAQS.

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO ₂ Standard (CAAQS)	0.18 ppm
Annual NO ₂ Standard (CAAQS)	0.03 ppm
24-Hour PM ₁₀ Standard – Construction (South Coast AQMD)	10.4 µg/m ³
24-Hour PM _{2.5} Standard – Construction (South Coast AQMD)	10.4 µg/m ³
24-Hour PM ₁₀ Standard – Operation (South Coast AQMD)	2.5 µg/m³
24-Hour PM _{2.5} Standard – Operation (South Coast AQMD)	2.5 µg/m³
Annual Average PM ₁₀ Standard (South Coast AQMD)	1.0 µg/m³
Source: South Coast AQMD 2023. ppm – parts per million; μg/m³– micrograms per cubic meter	

Table 5.2-6South Coast AQMD Localized Significance Thresholds

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (pounds per day) of emissions generated on-site that would trigger the levels shown in Table 5.2-6 for projects under five acres. These "screening-level" LST thresholds are the LSTs for all projects of five acres and less and are based on emissions over an 8-hour period; however, they can be used as screening criteria for larger projects to determine whether dispersion modeling may be required.

⁷ The CO hotspot analysis refers to the modeling conducted by the Bay Area Air Quality Management District for its CEQA Guidelines because it is based on newer data and considers the improvement in mobile-source CO emissions. Although meteorological conditions in the Bay Area differ from those in the Southern California region, the modeling conducted by BAAQMD demonstrates that the net increase in peak hour traffic volumes at an intersection in a single hour would need to be substantial. This finding is consistent with the CO hotspot analysis South Coast AQMD prepared as part of its 2003 AQMP to provide support in seeking CO attainment for the SoCAB. Based on the analysis prepared by South Coast AQMD, no CO hotspots were predicted for the SoCAB. As noted in the preceding footnote, the analysis included some of Los Angeles' busiest intersections, with daily traffic volumes of 100,000 or more peak hour vehicle trips operating at LOS E and F (South Coast AQMD 2003).

The construction screening-level LSTs in SRA 23 are shown in Table 5.2-7, *South Coast AQMD Construction Screening-Level Localized Significance Thresholds*. For construction, LSTs are based on the maximum screening size of five acres.

Table E 0 7	South Coast AOMD Construction Screening Lovel Significance Thresholds
	South Coast AQIVID Construction Screening-Level Significance Thesholds

	Threshold (lbs./day)				
	Nitrogen Oxides Carbon Monoxide Coarse Particulates Fine Particulates				
Acreage Disturbed	(NO _x)	(CO)	(PM10)	(PM _{2.5})	
5 Acres ¹	270	1,577	13	8	
Source: South Coast AQMD 2009.					

¹ LSTs are based on sensitive receptors within Source Receptor Area 23 for a 5-acre site 25 meters from the nearest sensitive receptor.

The operational screening-level LSTs in SRA 23 are shown in Table 5.2-8, *South Coast AQMD Operational Screening-Level Localized Significance Thresholds*. For operation, LSTs are based on the maximum screening size of five acres.

 Table 5.2-8
 South Coast AQMD Operational Screening-Level Significance Thresholds

	Threshold (lbs./day)					
	Nitrogen Oxides	Nitrogen Oxides Carbon Monoxide Coarse Particulates Fine Particulates				
Acreage Disturbed	(NO _x)	(CO)	(PM ₁₀)	(PM _{2.5})		
5 Acres ¹	270	1,577	4	2		

Source: South Coast AQMD 2009.

¹ LSTs are based on sensitive receptors within Source Receptor Area 23 for a 5-acre site 25 meters from the nearest sensitive receptor.

Health Risk

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD Rule 1401, placed on CARB's air toxics list pursuant to AB 1807, or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 5.2-9, *South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for construction and operation of a project. The type of land uses that typically generate substantial quantities of criteria air pollutants and TACs from operations include industrial (stationary sources) and warehousing (truck idling) land uses (CARB 2005). Educational and recreational land uses do not use substantial quantities of TACs; thus, these thresholds are typically applied to new industrial projects' operations only. Additionally, the purpose of this environmental evaluation is to identify the significant effects of the project on the environment, not the significant effects of the environment on the project (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478)).

Table 5.2-9 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds						
Maximum Incremental Cancer Risk (Project-Level)	≥ 10 in 1 million					
Cancer Burden (in areas ≥ 1 in 1 million)	> 0.5 excess cancer cases					
Hazard Index (project increment)	≥ 1.0					
Source: South Coast AQMD 2023.						

Environmental Impacts 5.2.3

5.2.3.1 METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the proposed project. South Coast AQMD's CEQA Air Quality Handbook and updates on its website are intended to provide local governments with guidance for analyzing and mitigating projectspecific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and were used in this analysis.

Regional air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only). The following is a summary of the assumptions used for the proposed project's analysis.

Construction

Construction would entail demolition, site preparation, grading, utilities trenching, building construction, paving, architectural coating, field installation, track surfacing, and finishing and landscaping activities across approximately 11 acres. The proposed project construction would occur over 12 months, from June 2025 through June 2026.

Operation

As identified stated in Chapter 3, Project Description, the proposed project would entail the renovation of the existing track and field; addition of field lighting, public address (PA) system, scoreboard, and bleachers to accommodate 2,800 spectators; construction of a 5,500-square-foot field house that would include restrooms, ticket office, storage, concessions stand, and team room; and repaying and restriping the 134,000-square-foot parking lot (see Figure 3-4, Conceptual Site Plan). The proposed project would relocate the existing tennis courts (59,677 square feet) by approximately 10 feet (south). The proposed project would reduce the number of parking spaces by 63 parking stalls. The proposed project would not impact student or staff capacity at La Sierra HS.

The proposed track and field would be primarily utilized for sporting activities that are currently taking place off-campus at neighboring schools. For example, the La Sierra HS football team currently utilizes the NVHS stadium for home games. Therefore, future sports events at the renovated track and field would result in a reduction in total VMT because the proposed project would be closer to most of the homes in the attendance area of La Sierra HS as compared to the field at NVHS.

Upon project completion, a capacity-level event could generate a maximum of 1,680 daily vehicle trips (Appendix 5.7-1). However, capacity-level events would not occur frequently, and the proposed schedule for sports events would be similar to the current sports schedule. Since vehicle trips to attend games and practices would occur regardless of the proposed project, the proposed project would not result in any new vehicle trips to the local roadway network during operation. Moreover, the proposed project's energy consumption would be limited to new lighting and mechanical equipment, such as the PA system or other equipment in the 5,500-square-foot field house. Considering the extent of new building space, lighting, and mechanical equipment anticipated for the proposed project, operational emissions would be minimal and are therefore addressed in this analysis qualitatively.

5.2.3.2 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.2-1: The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. [Thresholds AQ-1]

South Coast AQMD is directly responsible for reducing emissions from area, stationary, and mobile sources in the SoCAB to achieve the National and California AAQS and has responded to this requirement by preparing an AQMP. The South Coast AQMD Governing Board adopted the 2022 AQMP, which is a regional and multiagency effort (South Coast AQMD, CARB, SCAG, and EPA).

A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMP.

The two principal criteria for conformance with an AQMP are:

- 1. Whether the project would exceed the assumptions in the AQMP.
- 2. Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timeline attainment of air quality standards.

SCAG is South Coast AQMD's partner in the preparation of the AQMP, providing the latest economic and demographic forecasts and developing transportation measures. Regional population, housing, and employment projects developed by SCAG are based, in part, on general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP.

Criterion 1: Consistency with Regional Growth Assumptions

Section 15206(b)(2) of the CEQA Guidelines states that a project is of statewide, regional, or area-wide significance if the project would constitute a proposed residential development of more than 500 dwelling units; a proposed shopping center or business establishment employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space; a proposed hotel/motel development of more than 500 rooms; or a proposed industrial, manufacturing, processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 50 acres of land, or encompassing more than 650,000 square feet of floor area.

The proposed project would entail the renovation of the existing track and field with the addition of field lighting, public address (PA) system, scoreboard, field house, and bleachers to accommodate La Sierra HS sports activities. Implementation of the proposed project would not involve any residential development and would not have a direct impact on local resident growth assumptions for the City. In addition, the proposed project would involve improvements to an existing campus without increasing student or employment capacity and would not substantially influence the employment growth forecasts for the City. Therefore, the proposed project is not anticipated to substantially affect demographic projections beyond what is accounted for in the current 2022 AQMP. Therefore, the proposed project would be consistent with the AQMP under the first criterion.

Criterion 2: Consistency with Regional Air Quality Standards

The SoCAB is designated nonattainment for O₃ and PM_{2.5} under the California and National AAQS,⁸ nonattainment for PM₁₀ under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS (CARB 2024a). Long-term emissions generated by the proposed project would not produce criteria air pollutants that exceed the South Coast AQMD regional significance thresholds for the proposed project operations (see Impact 5.2-3). South Coast AQMD's significance thresholds identify whether a project has the potential to cumulatively contribute to the SoCAB's nonattainment designations. Because the proposed project would not exceed the South Coast AQMD's regional significance thresholds (see Impact 5.2-2 and Impact 5.2-3), the proposed project would not contribute to an increase in frequency or severity of air quality violations or delay attainment of the AAQS and would be consistent with the AQMP under the second criterion.

Summary

The proposed project is not anticipated to result in population or employment growth that would exceed the demographic growth forecasts in the 2022 AQMP. Moreover, the proposed project would not result in exceedances of South Coast AQMD regional significance thresholds and would not contribute to existing or projected AAQS violations. Therefore, the proposed project would be considered consistent with the AQMP.

⁸ The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal PM_{2.5} standards. The 2021 PM_{2.5} Redesignation Request and Maintenance Plan demonstrates that the South Coast meets the requirements of the CAA to allow the EPA to redesignate the SoCAB to attainment for the 65 μ g/m³ and 35 μ g/m³ 24-hour PM_{2.5} standards. CARB will submit the 2021 PM_{2.5} Redesignation Request to the EPA as a revision to the California SIP (CARB 2021).

Level of Significance Before Mitigation: Less than significant.

Impact 5.2-2: Construction activities associated with the proposed project would not generate short-term emissions that exceed South Coast AQMD's significance thresholds and would not cumulatively contribute to the nonattainment designations of the SoCAB. [Threshold AQ-2]

Construction Phase

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew.

Construction of the proposed project would generate criteria air pollutants associated with construction equipment exhaust and fugitive dust from demolition, site preparation, grading, utilities trenching, building construction, paving, architectural coating, finishing and landscaping, track surfacing, and field installation. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change. With the assumption of overlapping building construction, paving, and architectural coating activities, a conservative estimate of maximum daily construction emissions associated with the proposed project is provided in Table 5.2-10, *Proposed Project Maximum Daily Regional Construction Emissions*.

	Pollutants (lbs./day) ^{1, 2}					
Construction Year	VOC	NOx	CO	SO ₂	PM10	PM _{2.5}
Proposed Project Construction						
Year 2025 Construction	31	32	32	<1	14	6
Year 2026 Construction	2	20	26	<1	4	1
Impact Analysis						
Maximum Daily Construction Emissions	31	32	32	<1	14	6
South Coast AQMD Regional Significance Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Table 5.2-10 Proposed Project Maximum Daily Regional Construction Emissions

Source: CalEEMod Version 2022.1. Highest winter or summer emissions are reported. (See Appendix 5.2-1)

¹ Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times par day, reducing appendix to 15 miles par being an unaved surfaces, and stract supports with Pule 1186, compliant supports

times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and street sweeping with Rule 1186-compliant sweepers.

² Based on the preliminary information provided by the District. Where specific information regarding proposed project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

As shown in Table 5.2-10, construction of the proposed project would not result in an exceedance of the regional significance thresholds for any criteria air pollutant. This impact would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Impact 5.2-3: Operational activities associated with the proposed project would not generate long-term emissions that exceed South Coast AQMD's significance thresholds and would not cumulatively contribute to the nonattainment designations of the SoCAB. [Threshold AQ-2]

Operational Phase

The proposed project would entail the renovation of the existing track and field with the addition of field lighting, PA system, scoreboard, field house, and bleachers to accommodate La Sierra HS sports activities. The proposed project would not impact student or staff capacity at La Sierra HS and would accommodate existing sporting activities that are currently taking place off-campus at neighboring schools. As mentioned previously, future sports events at the renovated track and field would result in a reduction in total VMT because the proposed project would be closer to most of the homes in the attendance area of La Sierra HS as compared to the field at NVHS. Although capacity-level events could generate a maximum of 1,680 daily vehicle trips, capacity-level events would not occur frequently, and the proposed schedule for sports events would be similar to the current sports schedule (Appendix 5.7-1). Since vehicle trips to attend games and practices would occur regardless of the proposed project, the proposed project would not result in any new vehicle trips to the local roadway network during operation, which typically constitute the largest emission source for land use development projects. Lastly, the proposed project's energy consumption would be limited to new lighting and mechanical equipment, such as the PA system or other equipment included in the field house.

Considering the extent of new building space, lighting, and mechanical equipment anticipated for the proposed project and the absence of new vehicle trips to the local roadway network, net operational emissions beyond existing conditions would be minimal and would not exceed the South Coast AQMD's significance thresholds. This impact would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Impact 5.2-4: Construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations of toxic air contaminants. [Threshold AQ-3]

The proposed project could expose nearby receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated levels. Unlike the mass emissions shown in the regional emissions analysis in Table 5.2-10, which are described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or μ g/m³) and can be correlated to potential health effects.

Construction-Phase Localized Significance Thresholds

Screening-level LSTs (pounds per day) are the amount of project-related mass emissions at which localized concentrations (ppm or μ g/m³) could exceed the AAQS for criteria air pollutants for which the SoCAB is designated nonattainment. LSTs are based on the acreage disturbed and distance to the nearest sensitive receptor. Screening-level LSTs are based on the project site size and distance to the nearest sensitive receptor. As described previously, these "screening-level" LST thresholds are the LSTs for all projects of five acres and

less and are based on emissions over an 8-hour period; however, they can be used as screening criteria for larger projects to determine whether dispersion modeling may be required. Thresholds are based on the California AAQS, which are the most stringent, established to provide a margin of safety in the protection of the public's health and welfare. LSTs are designed to protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other illness, and persons engaged in strenuous work or exercise. Table 5.2-11, *Maximum Daily On-Site Localized Construction Emissions*, shows the maximum daily construction emissions (pounds per day) generated during on-site construction activities compared with the South Coast AQMD's screening-level LSTs.

	Pollutants (pounds per day) ^{1, 2}			
Construction	NOx	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	32	30	10	5
5.00-Acre LST	270	1,577	13	8
Exceeds LST?	No	No	No	No
Sources: CalEEMod Version 2022.1, and South Coast AQMD 2009 and 2011. LSTs are base winter or summer emissions are reported. (see Appendix 5.2-1) In accordance with South Coast AQMD methodology, only on-site stationary sources and r	ed on sensitive recept	ors within 82 feet (25 curring on the project	5 meters) in SRA 2 site are included i	23. Highest in the analysis.

 In accordance with South Coast AQMD methodology, only on-site stationary sources and mobile equipment occurring on the project site are included in the analysis.
 Based on information provided or verified by the District. Where specific information regarding project-related construction activities or processes was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by the South Coast AQMD. Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day and reducing speed limit to 15 miles per hour on unpaved surfaces.

As shown in Table 5.2-12, construction activities associated with the proposed project would not generate emissions that exceed the South Coast AQMD construction-phase LSTs, and this impact would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Impact 5.2-5: Operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations of criteria air pollutants and toxic air contaminants. [Threshold AQ-3]

As previously stated, the proposed project would entail the renovation of the existing track and field with the addition of field lighting, a PA system, scoreboard, field house and bleachers to accommodate sports events. Overall, the proposed project would not impact student or staff capacity at La Sierra HS and would accommodate existing sporting activities that are currently taking place off-campus at neighboring schools. The proposed project would not involve the introduction and operation of land uses that are generally associated with substantial pollutant emissions that may affect nearby receptors, such as manufacturing or heavy industrial land uses.

Mobile trips typically constitute the largest emission source for land use development projects. Upon project completion, the La Sierra HS football team would play home games at the project site. Since vehicle trips to attend games and practices would occur regardless of the proposed project, and the proposed project would

not result in any new vehicle trips to the local roadway network during operation but would provide a closer destination to most of the homes in the attendance area of La Sierra HS. Moreover, the proposed project's energy consumption would be limited to new lighting and mechanical equipment, such as the PA system or other equipment included in the field house.

Considering the extent of new building space, lighting, and mechanical equipment anticipated for the proposed project and the absence of new vehicle trips to the local roadway network, net operational emissions beyond existing conditions would be minimal and would not exceed the South Coast AQMD's operational LSTs. Therefore, operation of the proposed project would not expose receptors to substantial pollutant concentrations of emissions generated on-site, and this impact would be less than significant.

Carbon Monoxide Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the State one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse in the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. The SoCAB has been designated in attainment of both the National and California AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—to generate a significant CO impact (BAAQMD 2023).

Upon project completion, capacity-level events could generate an estimated 840 vehicle trips during peak hour (770 inbound and 70 outbound) (Appendix 5.7-1). However, capacity-level events would not occur frequently and the proposed schedule for sports events would be similar to the current sports schedule. Since vehicle trips to attend games and practices would occur regardless of the proposed project, the proposed project would not result in any new vehicle trips to the local roadway network during operation beyond what is currently occurring. Moreover, as shown in Table 5.7-8, *2026 Traffic Volumes with Project*, in Section 5.7, *Transportation*, of this DEIR, future traffic volumes at nearby intersections would reach a peak of 3,849 vehicles during a Friday evening pre-event peak hour at the intersection of La Sierra Avenue and Magnolia Avenue. As such, the proposed project would not add vehicle trips to the regional roadway network to cause an exceedance of 44,000 vehicles per hour or 24,000 vehicle per hour where vertical and/or horizontal mixing is substantially limited at an intersection. Therefore, implementation of the proposed project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project area. Impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Impact 5.3-6: The proposed project would not result in other emissions that would adversely affect a substantial number of people. [Threshold AQ-4]

The threshold for odor is if a project creates an odor nuisance pursuant to South Coast AQMD Rule 402, Nuisance, which 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 provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Construction

During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reached any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Furthermore, short-term construction-related odors are expected to cease upon the drying or hardening of odor-producing materials. Therefore, impacts associated with construction-generated odors are considered less than significant.

Operation

The type of facilities that are considered to have objectionable odors include wastewater treatment plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The project site is within an existing campus; the proposed project would include recreational uses and would not include the types of land uses that create objectionable odors. Additionally, the proposed project would be required to comply with South Coast AQMD Rule 402, which would minimize and provide a control for objectionable or offensive odors that are reported to the South Coast AQMD. The proposed project would not generate potentially significant odor impacts affecting a substantial number of people. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant.

5.2.4 Cumulative Impacts

In accordance with the South Coast AQMD methodology, any project that produces a significant projectlevel regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects in the local area include new development and general growth in the project area. The greatest source of emissions in the SoCAB is mobile sources. Due to the extent of the area potentially impacted by cumulative project emissions (i.e., the SoCAB), the South Coast AQMD considers a project cumulatively significant when project-related emissions exceed the South Coast AQMD regional emissions

thresholds shown in Table 5.2-5. In addition, per the draft guidelines released by the South Coast AQMD cumulative risk Working Group, projects that result in project risk impacts are also considered to result in cumulative risk impacts.

Construction

The SoCAB (Riverside County portion) is designated nonattainment for O₃ and PM_{2.5} under the California and National AAQS and nonattainment for PM₁₀ under the California AAQS.⁹ Construction of cumulative projects would further degrade the regional and local air quality. Air quality would be temporarily impacted during construction activities. As previously discussed, construction activities associated with the development of the proposed project would not exceed regional or localized significance thresholds. Therefore, the proposed project's construction-related emissions would not result in cumulative construction-related emissions or health risk impacts. Moreover, odor-related impacts resulting from construction would be temporary and confined to the immediate vicinity of the construction equipment, which would occur in the interior of the project site away from nearby receptors. As such, construction-related impacts would not be cumulatively considerable.

Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional and/or cancer risk threshold values is not considered a substantial source of air pollution by the South Coast AQMD and does not add significantly to a cumulative impact. As discussed in Impact 5.2-3, implementation of the proposed project would not result in additional vehicle trips to the local roadway network or related emissions that would exceed the South Coast AQMD regional significance thresholds. In addition, emissions of criteria air pollutants would not result in localized impacts that exceed the South Coast AQMD localized significance thresholds and cancer risk threshold. Finally, odors resulting from operation of the proposed project would not change from existing conditions as no new odor-generating land uses are proposed as part of the project. As such, operational impacts would not be cumulatively considerable. Therefore, the air pollutant emissions associated with the proposed project would not be cumulatively considerable, and impacts would be less than significant.

5.2.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, all impacts would be less than significant: Impacts 5.2-1, 5.2-2, 5.2-3, 5.2-4, 5.2-5 and 5.2-6.

5.2.6 Mitigation Measures

No mitigation measures are required.

⁹ CARB approved the South Coast AQMD's request to redesignate the SoCAB from serious nonattainment for PM₁₀ to attainment for PM₁₀ under the national AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM₁₀ standards during the period from 2004 to 2007. In June 2013, the EPA approved the State of California's request to redesignate the South Coast PM₁₀ nonattainment area to attainment of the PM₁₀ National AAQS, effective on July 26, 2013.

5.2.7 Level of Significance After Mitigation

All impacts with respect to air quality are less than significant.

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5. Environmental Analysis

5.3 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section of the Draft Environmental Report (DEIR) evaluates the potential for implementation of the La Sierra High School Track and Field Project (proposed project) to impact cultural and paleontological resources at the La Sierra High School. With the update of the California Environmental Quality Act (CEQA) Guidelines approved in December 2018, impacts to paleontological resources moved to the Geology and Soils section of the Appendix G checklist. However, the Geology and Soils topic has been determined to have a less-than-significant impact and is analyzed in Chapter 8, *Impacts Found Not to Be Significant*, of this DEIR. Given the potential impacts that could occur to paleontological resources, this DEIR analyzes paleontological resources as part of this section.

Cultural resources comprise archaeological and historical resources. Archaeology studies human artifacts such as places, objects, and settlements that reflect group or individual religious, cultural, or everyday activities. Historical resources include sites, structures, objects, or places that are at least 50 years old and are significant for their engineering, architecture, cultural use or association, etc. In California, historic resources cover human activities over the past 12,000 years. Cultural resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. Paleontological resources are the fossilized remains of plants and animals.

This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators; constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1 which would include renovating the track and field; and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

5.3.1 Environmental Setting

5.3.1.1 REGULATORY BACKGROUND

Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic

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Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

National Register of Historic Places

The National Register of Historic Places (NRHP) is authorized by the National Historic Preservation Act of 1966 (Code of Federal Regulations, Title 36, Chapter I, Part 60). It is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architectures, archaeology, engineering, and culture. The NRHP recognizes resources of local, state, and national significance that have been documented and evaluated according to uniform standards and criteria.

The NRHP is administered by the National Park Service. Properties are nominated to the NRHP by the State Historic Preservation Officer of the state in which the property is located, by the Federal Preservation Officer for properties under federal ownership or control, or by the Tribal Historic Preservation Officer if a property is on tribal lands.

To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

- A. Is associated with events that have made a significant contribution to the broad patterns of history.
- B. Is associated with the lives of persons in our past.
- C. Embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- D. Has yielded, or may be likely to yield, information important in prehistory or history.

A final critical component of eligibility is "integrity." Integrity refers to the ability of a property to convey its significance and the degree to which the property retains the identity, including physical and visual attributes, for which it is significant under the four basic criteria. The NRHP criteria recognize seven aspects or qualities of integrity: location, design, setting, materials, workmanship, feeling, association.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites on federal and Indian lands.

Native American Graves Protection and Repatriation Act

NAGPRA is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

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Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act was enacted as Public Law 111-11, Title VI Subtitle D of the Omnibus Public Land Management Act of 2009 (16 US Code Sections 470aaa–470aaa-11) and directs the Department of Agriculture (United States [US Forest Service] and the Department of the Interior (National Park Service, Bureau of Land Management, Bureau of Reclamation, and Fish and Wildlife Service) to implement comprehensive paleontological resource management programs. The US Forest Service published the Department of Agriculture version of the Preservation Act regulations in the Federal Register in April 2015.

Preservation of American Antiquities

The Federal Antiquities Act of 1906 was enacted with the primary goal of protecting cultural resources in the United States. It explicitly prohibits appropriation, excavation, injury, and destruction of any "historic or prehistoric ruin or monument, or any object of antiquity" on lands owned or controlled by the federal government without permission of the secretary of the federal department with jurisdiction. It also established criminal penalties for these acts, including fines and/or imprisonment. Neither the Antiquities Act itself nor its implementing regulations specifically mention paleontological resources. However, several federal agencies—including the National Park Service, the Bureau of Land Management, and the US Forest Service—have interpreted objects of antiquity to include fossils. Consequently, the Antiquities Act also represents an early cornerstone for efforts to protect the nation's paleontological resources.

State Regulations

California Public Resources Code

Archaeological, paleontological, and historical sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, cultural and paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA.

PRC Sections 5020 to 5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

PRC Sections 5079 to 5079.65 define the functions and duties of the Office of Historic Preservation, which administers federal- and state-mandated historic preservation programs in California as well as the California Heritage Fund.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission (NAHC); require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

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California Register of Historical Resources

The State Historical Resources Commission designed this program for state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The California Register of Historical Resources (CRHR) is the authoritative guide to the state's significant historical and archaeological resources.

The CRHR program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA.

To be eligible for listing in the CRHR, a resource must meet at least one of the following criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- B. Associated with the lives of person important to local, California or national history.
- C. Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values.
- D. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation. (California Public Resources Code [PRC] Section 5024.1[c])

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. In summary, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion D, it maintains the potential to yield significant scientific or historical information or specific data.

California Health and Safety Code

California Health and Safety Code, Section 7050.5, if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are or believed to be Native American, s/he shall notify the NAHC in Sacramento within 48 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely

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descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

Local Regulations

City of Riverside General Plan

The Historic Preservation Element of the Riverside General Plan includes the following policies related to cultural and paleontological resources:

- Policy HP-1.1. The City shall promote the preservation of cultural resources to ensure that citizens of Riverside have the opportunity to understand and appreciate the City's unique heritage.
- Policy HP-1.2. The City shall assume its direct responsibility for historic preservation by protecting and maintaining its publicly owned cultural resources. Such resources may include, but are not limited to, buildings, monuments, landscapes, and right-of-way improvements, such as retaining walls, granite curbs, entry monuments, light standards, street trees, and the scoring, dimensions, and patterns of sidewalks, driveways, curbs and gutters.
- 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-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.

Riverside Municipal Code Title 20: Cultural Resources

The purpose of Title 20 is to safeguard the City's heritage as embodied in cultural resources, encourage public knowledge, and foster civic and neighborhood pride and sense of identity based on recognition of cultural resources. Title 20 establishes the authority for the preservation, composition, and administrative requirements of the Cultural Heritage Board; criteria for evaluating projects affecting cultural resources; and procedures for protecting and designating cultural resources.

Title 20 requires a Certificate of Appropriateness to alter, demolish, or relocate properties that are designated or determined eligible for designation as a city cultural resource. A Certificate of Appropriateness is also required for new construction within historic districts and neighborhood conservation areas.

5.3.1.2 EXISTING CONDITIONS

Historical Resources

The City of Riverside Historic Preservation Element discusses the history of the City and its effort to preserve its rich history. According to the City's Historic Districts, Neighborhood Conservation Areas, and

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Cultural Survey Areas figure, the campus is not within a historic district, potential historic district, neighborhood conservation area, potential neighborhood conservation area, or a cultural survey area (Riverside 2011).

The National Register of Historic Places mapper identifies various nationally recognized historic structures within the City, and the California Office of Historic Preservation database identifies sites listed within the California Register, California landmark, and California points of interest. La Sierra HS is not listed on either of these databases (OHP 2024a; NPS 2024). The closest California Historic Resource and nationally listed historic resource is the Arlington Branch Library and Fire Hall at 9556 Magnolia Avenue, approximately 1.7 miles east of the campus.

Given its Mid-century Modern architectural style, the La Sierra HS was surveyed in the 2009 Modernism Context Statement, where it was identified that Herman Ruhnau, a locally "dominant" architect, designed the school (Riverside 2009). The campus was surveyed again in 2013 as part of the City of Riverside Citywide Modernism Intensive Survey, which determined the campus appears to be individually eligible for local listing or designation through survey evaluation (5S3) (Riverside 2013; OHP 2024b). According to the City of Riverside's Historic Resources Inventory data tool, the campus was previously surveyed; however, the campus is not officially designated as a historical resource on a local, state, or federal level (OHP 2024a; NPS 2024; Riverside 2024).

Archaeological Resources

Prehistoric and ethnohistoric archaeological sites likely to be found within the City include villages represented by residential bases with house features (stone and/or adobe), storage features, human burials and cremations, rock art (pictographs and/or petroglyphs); temporary encampments represented by flaked and ground stone scatters with fire hearths and possibly storage features; resource procurement and processing sites represented by bedrock milling stations, tool stone quarries, flaked and ground stone artifact scatters, and/or hunting blinds; trails demarcated by cairns and possibly rock art; isolated cultural features such as rock art, intaglios, and/or shrines; isolated flaked or ground stone artifacts; and traditional cultural landscapes/sacred places that may include important gathering or collecting places, springs, mountain tops or rock outcroppings, burial grounds, etc. (Riverside 2007). The campus and surrounding area's archaeological sensitivity is "unknown" according to Figure 5.5-1, Archaeological Sensitivity, of the City's General Plan EIR (Riverside 2007).

Paleontological Resources

A paleontological resource is a natural resource characterized as faunal or floral fossilized remains but may also include specimens of nonfossil material dating to any period preceding human occupation. It is a natural science closely associated with geology and biology. In geologically diverse California, vertebrate, invertebrate, and plant fossils are usually found in sedimentary and metasedimentary deposits.

From the early 1920s through 1950s, a number of localities have been discovered in and around the City, specifically among the sands of the Santa Ana River banks (Riverside 2007). In 1923, fragments of tusk and two mammoth molars were found at a place known as "Campbell's Sand Pit," and in 1952, fragments of a

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mammoth jaw were discovered along the river near Grand Avenue. However, as of 2004, the area south of Mockingbird Canyon Reservoir is the only location considered to be of paleontological importance in the City, approximately 3.6 miles east of La Sierra HS (Riverside 2007).

According to the U.S Geological Survey, *Geologic Map of the Riverside West 7.5' Quadrangle*, the campus consists of old alluvium fan deposits (Qof) aging from the late to middle Pleistocene (USGS 2024). The University of California Museum of Paleontological Resources (UCMP), an online paleontological database, identified a total of 204 paleontological resources in Riverside County (UCMP 2024).

5.3.2 Thresholds of Significance

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated the with lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1; 14 CCR § 4852)

The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource.

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- C-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
- C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- C-3 Disturb any human remains, including those interred outside of dedicated cemeteries.
- C-4 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

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5.3.3 Environmental Impacts

5.3.3.1 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.3-1: Development of the proposed project would not impact an identified historic resource. [Threshold C-1]

Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered "historically significant" if it meets one of the following criteria:

- i. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- ii. Is associated with the lives of persons important in our past;
- iii. Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- iv. Has yielded, or may be likely to yield, information important in prehistory or history.

The La Sierra HS was built in 1969, and subsequent development followed thereafter (La Sierra HS 2021). The project site has been previously disturbed and developed with the existing track and field, tennis courts, baseball field, and parking lot, the campus is developed with buildings, and the surrounding area is built out with urban development. La Sierra HS is not listed in the California Historical Landmarks, Points of Historical Interest, or State Historic Structures or the National Register of Historic Places (OHP 2024a; NPS 2024). Additionally, the Riverside Historic Preservation Element does not identify the campus as a historic resource, and the La Sierra HS is not within an identified historic district, neighborhood conservation area, and cultural survey area (Riverside 2011, 2012).

The 2009 Survey identified the campus' architect, Herman Ruhnau, as a locally "dominant" architectural figure (Riverside 2009). The 2013 City of Riverside Citywide Modernism Intensive Survey determined that the campus is designated as 5S3 (Riverside 2013). Although the campus was previously surveyed, the campus is not designated or listed as a historical resource on a local, state, or federal database (OHP 2024; NPS 2024; Riverside 2024). Additionally, the proposed project would not change or alter any of the existing buildings onsite; improvements would occur within the project site's footprint and would not impact historic resources offsite. Therefore, the proposed project would not impact designated or proposed historic resources. As such, no impact to historical resources would occur.

Level of Significance Before Mitigation: No impact.

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Impact 5.3-2: Development of the proposed project could impact archaeological resources. [Threshold C-2]

Implementation of the proposed project would result in ground-disturbing activities to accommodate the proposed improvements. Earthwork associated with the proposed project may include but is not limited to grading, utility trenching, drilling holes, etc.

As described in Section 5.3.1.3, *Existing Conditions*, the archaeological sensitivity of the campus and surrounding area is unknown. Additionally, the project site has been previously disturbed since it is currently developed with an existing track and field, baseball field, tennis courts, and parking lot. Therefore, it is unlikely that the proposed project would encounter archaeological resources. Nevertheless, the potential still exists that ground-disturbing activities from the proposed project may uncover unknown archaeological resources. In the unlikely event that archaeological resources are discovered, a custom caution and a halt-work would be required to ensure adverse impacts to archaeological resources do not occur. Impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially Significant.

Impact 5.3-3: Grading activities could potentially disturb human remains. [Threshold C-3]

The proposed project would require earthwork activities, such as grading, drill holes, and utility trenching. The project site is developed with an existing track and field, baseball field, tennis courts, and parking lot. Although unlikely, the potential exists that human remains may be encountered. California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 mandate procedures in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Specifically, California Health and Safety Code Section 7050.5 requires that if human remains are discovered within a project site, disturbance of the site shall remain halted until the county coroner has conducted an investigation into the circumstances, manner, and cause of death, and made recommendations concerning the treatment and disposition of the human remains to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC. While it is unlikely that ground-disturbing activities associated with the proposed project could result in the discovery of human remains, compliance with existing law would ensure that significant impacts to human remains would not occur.

Level of Significance Before Mitigation: Less than Significant.

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Impact 5.3-4:	Development of the proposed project could impact paleontological resources. [Threshold C-
	4]

Paleontological resources or fossils are remains of ancient plants and animals that can provide scientifically significant information about the history of life on earth. This sensitivity is determined by rock type, history of the geologic unit in producing significant fossils, and fossil localities that are recorded from that unit.

As described in Section 5.3.1.3, *Existing Conditions*, a UCMC record search identified 204 paleontological resources within Riverside County, and the General Plan EIR indicated that the area south of Mockingbird Canyon Reservoir is the only location in the City considered to be of paleontological importance. Paleontological resources identified through the UCMC records search dated within the Pleistocene period were primarily found at the San Timoteo, San Gorgonio Pass, or Willis Palms approximately 17.5 miles, 41 miles, and 66 miles away respectively. The Mockingbird Canyon Reservoir is approximately 3.6 miles southeast of the campus.

Additionally, the project site has previously been distributed and is developed with athletic facilities and a parking lot. While paleontological resources are not expected to be discovered during project construction, it is possible that unknown paleontological resources could be discovered during grading activities. Therefore, impacts would be potentially significant.

The project site is entirely developed with athletics facilities and a parking lot associated with La Sierra HS. No unique geologic features exist on the project site. The proposed project would not directly nor indirectly destroy unique geologic features. No impact would occur.

Level of Significance Before Mitigation: Potentially Significant

5.3.4 Cumulative Impacts

Development of the proposed project and related projects have the potential to encounter and potentially degrade cultural and paleontological resources, and human remains. However, similar to the proposed project, each related project would be expected to comply with PRC Section 15064.5, perform site-specific cultural analyses, implement mitigation measures if needed, and comply with other applicable regulatory compliance measures. The proposed project site does not contain any known cultural or paleontological resources or human remains. However, because the proposed project would include ground-disturbing activities, the proposed project would require mitigation measures to minimize its impact to potential archeological and paleontological resources to a less than significant level, which would reduce the potential for the proposed project's contribute to cumulative impacts to cultural and paleontological resources. Therefore, the proposed project's contribution to cumulative impacts would be considered less than cumulatively considerable, and would be less than significant.

5.3.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.3-1 and 5.3-3.

5. Environmental Analysis CULTURAL AND PALEONTOLOGICAL RESOURCES

Without mitigation, these impacts would be **potentially significant**:

- Impact 5.3-2 Development of the proposed project could potentially impact archaeological resources.
- Impact 5.3-4 Development of the proposed project could potentially impact paleontological resources.

5.3.6 Mitigation Measures

Impact 5.3-2

CUL-1 If cultural resources are encountered during ground-disturbing activities, work in the immediate area shall cease, and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find(s). If the discovery proves to be significant under CEQA, additional work such as data recovery excavation may be warranted and will be reported to the Alvord School District. If significant Native American cultural resources are discovered, the archaeologist on call shall contact the applicable Native American tribal contact(s). If requested by the Native American tribe(s), District, or archaeologist on call shall, in good faith, consult on the discovery and its disposition (e.g., avoidance, preservation, reburial, return of artifacts to tribe).

Impact 5.3-4

CUL-2 A qualified paleontologist shall be on call in the event that paleontological resources are found during ground-disturbing activities. The paleontologist shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossils. The paleontologist shall be empowered to temporarily halt or divert equipment to allow for the removal of abundant or large specimens in a timely manner.

5.3.7 Level of Significance After Mitigation

Impact 5.3-2

Implementation of Mitigation Measure CUL-1 would require all ground-disturbing activities to halt in the event cultural resources are encountered and allow a qualified archaeologist to excavate or contact the appropriate Native American tribal contact to excavate such resources, which would reduce potential impacts to archaeological resources to a level that is less than significant.

Impact 5.3-4

Implementation of Mitigation Measure CUL-2 would require an on-call qualified paleontologist to halt any ground-disturbing activities for the removal and protection of paleontological resources, which would reduce potential impacts to paleontological resources to a level that is less than significant.

5. Environmental Analysis CULTURAL AND PALEONTOLOGICAL RESOURCES

5.3.8 References

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5. Environmental Analysis

5.4 ENERGY

This section of the Draft environmental impact report (DEIR) evaluates the energy implications of the proposed project in a local and regional context. The energy calculation sheets are included in Appendix 5.2-1, *Air Quality and Greenhouse Gas Emissions Modeling Data*.

This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators; constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1, which would include renovating the track and field; and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

5.4.1 Environmental Setting

5.4.1.1 REGULATORY BACKGROUND

Federal Regulations

Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of U.S. crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE Standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (mpg) in 2025. On March 30, 2020, the US Environmental Protection Agency (EPA) finalized updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. On December 21, 2021, under direction of Executive Order 13990 issued by President Biden, the National Highway Traffic Safety Administration (NHTSA) repealed SAFE Vehicles Rule Part One, which had preempted State and local laws related to fuel economy standards. In addition, on March 31, 2022, the NHTSA finalized new fuel standards that will increase fuel efficiency 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 mpg for passenger vehicles and light trucks for model year 2026, which will be a 10 mpg increase compared to model year 2021 (NHTSA 2022).

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The act sets increased corporate average fuel economy standards; the renewable fuel standard; appliance energy-efficiency standards; building energy-efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration (USEPA 2024).

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

State Regulations

Warren-Alquist Act

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest edition was in January 2023.

California Public Utilities Commission

In September 2008, the California Public Utilities Commission adopted the Long-Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision and goals for each economic sector, identifying specific near-term, midterm, and long-term strategies to assist in achieving these goals. This Plan sets the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.¹
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation and air conditioning, commonly referred to as "HVAC," will be transformed to
 ensure that its energy performance is optimal for California's climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five-billion-plus square feet of space accounts for 38 percent of the State's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, and space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of state's electricity and gas use (CPUC 2011).

The California Public Utilities Commission and the CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

Energy Related Regulations

Table 5.4-1, State Energy Regulations, provides a summary list of energy regulations in California.

¹ Zero net energy buildings are buildings where the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy created on the site.

Sector	Regulation	Description
Transportation	Assembly Bill 1493	AB 1493 (Pavley I) reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016.
	Executive Order N-79-20	Establishes a time frame for the transition to zero-emission passenger vehicles and trucks in addition to off-road equipment. It directs the California Air Resources Board to develop: 1) Passenger vehicle and truck regulations requiring increasing volumes of new zero emission vehicles (ZEV) sold in California toward the target of 100 percent of in-state sales by 2035; 2) Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZE by 2035; and 3) Strategies to achieve 100 percent zero emission from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the EPA, and local air districts.
Renewable Energy	Senate Bill (SB) 107, SB X1-2, Executive Order S-14-08,	Renewables Portfolio Standard (RPS). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2).
	SB 350	Established tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.
	SB 100	RPS for publicly owned facilities and retail sellers will consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.
	Senate Bill 1020	SB 1020 was signed into law on September 16, 2022. It requires renewable energy and zero- carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.
Energy Efficiency	Title 24, Part 6, Building Energy Efficiency Standards	Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (24 CCR [California Code of Regulations], Part 6). Part 6 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 Building Energy Efficiency Standards were approved by the California Building Standards Commission in December 2021. The 2022 standards became effective and replaced the 2019 standards on January 1, 2023. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).
	Title 24, Part 11, Green Building Standards Code (CALGreen)	On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11), or "CALGreen," was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory

Table 5.4-1 State Energy Regulations

Sector	Regulation	Description
		provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen standards became effective January 1, 2023.
	Title 20, Appliance Efficiency Regulations	The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Table 5.4-1State Energy Regulations

Regional Regulations

City of Riverside General Plan

The Air Quality Element of the City of Riverside General Plan includes the following policies related to energy:

- **Policy AQ-1.16.** Design safe and efficient vehicular access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.
- **Policy AQ-1.18.** New residential subdivisions shall be designed to encourage "walkable" neighborhoods with pedestrian walkways and bicycle paths to facilitate pedestrian travel.
- Policy AQ-2.6. Develop trip reduction plans that promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking.
- 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-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.

- Policy AQ-5.7. Require residential building construction to meet or exceed energy use guidelines in Title 24 of the California Administrative Code.
- Policy AQ-6.8. Continue Riverside Public Utilities' Energy Innovation Grant (EIG) program to fund research, development and demonstration projects aimed at advancing science and accelerating new technology.

5.4.1.2 EXISTING CONDITIONS

Electricity

The project site is in Southern California Edison's (SCE) service area, which spans much of southern California from Orange and Riverside counties to the south to Santa Barbara County to the west to Mono County to the north (CEC 2023a). Total electricity consumption in SCE's service area was approximately 107,876 gigawatt-hours (GWh) in 2022 (CEC 2024a). As shown in Table 5.4-2, *Riverside County 2022 Nonresidential Electricity Consumption*, nonresidential electricity consumption in Riverside County was approximately 8,720 GWh in 2022, or approximately 8.1 percent of SCE's total service area electricity consumption (CEC 2024b). As shown in Tabe 5.4-2, Riverside County was approximately 8,720 GWh in 2022, or approximately 8.1 percent of SCE's total service area electricity consumption (CEC 2024b). As shown in Tabe 5.4-2, Riverside County experienced a nonresidential per capita consumption rate of 3,587 kilowatt-hours (kWh) per person per year in 2022. It should be noted that county energy consumption rates were retrieved to characterize existing energy consumption because that is the smallest scale at which energy consumption estimates are publicly available.

	Table 5.4-2	Riverside County 2022 Nonresidential Electricity Consumption	
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Parameter	Quantity
Nonresidential Electricity Consumption (kWh per year)	8,720,016,764
Riverside County Population	2,430,976
Per Capita Electricity Consumption (kWh per year)	3,587
Sources: CEC 2024b; DOF 2023.	

Sources of electricity sold by SCE in 2022 were:

- 31.4 percent renewable, consisting mostly of solar and wind
- 2.3 percent large hydroelectric
- 22.3 percent natural gas
- 9.2 percent nuclear
- 0.2 percent other
- 34.6 percent unspecified sources—that is, not traceable to specific sources (SCE 2023)²

² The electricity sources listed reflect changes after the 2013 closure of the San Onofre Nuclear Generating Station, which is owned by SCE. Numbers are rounded up and may cause the total to not add up to exactly 100 percent.

Natural Gas

The Southern California Gas Company (SoCalGas) provides natural gas to Riverside County. SoCalGas's service area spans much of the southern half of California, from Imperial County to the southeast to San Luis Obispo County to the northwest, to part of Fresno County to the north, to Riverside County and most of San Bernardino County to the east (CEC 2022). Total natural gas consumption in SoCalGas's service area was approximately 5,026 million therms in 2022 (CEC 2024c). As shown in Table 5.4-3, *Riverside County 2022 Nonresidential Natural Gas Consumption*, nonresidential natural gas consumption in Riverside County was approximately 147 million therms in 2022, or approximately 2.9 percent of SoCalGas' total service area natural gas consumption (CEC 2024d). As shown in Table 5.4-3, Riverside County experienced a nonresidential per capita consumption rate of 60 therms per person per year in 2022. It should be noted that county energy consumption rates were retrieved to characterize existing energy consumption because that is the smallest scale at which energy consumption estimates are publicly available.

Parameter	Quantity
Nonresidential Natural Gas Consumption (Therms per Year)	146,917,206
Riverside County Population	2,430,976
Per Capita Natural Gas Consumption (Therms per Year)	60
Sources: CEC 2024d; DOF 2023.	

Transportation Fuels

California is one of the top producers of petroleum in the nation, with drilling operations throughout the state. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay Area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay Area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports (CEC 2024e). Since 2012, foreign supplies, led by Saudi Arabia through 2019, Ecuador in 2020 and 2021, and Iraq in 2022, provide over half of the crude oil refined in California (CEC 2024f). According to the United States Energy Information Administration, California's field production of crude oil has steadily declined since the mid-1980s, totaling approximately 125 million barrels in 2022 (EIA 2023).

According to the Energy Information Administration, transportation accounted for nearly 38 percent of California's total energy demand in 2021, the latest year of available information, amounting to approximately 2,785 trillion British thermal units (BTU) (EIA 2024). The CEC produces a California Annual Retail Fuel Outlet Report every year, which is a compilation of gasoline and diesel fuel sales across the state, available at the county level. According to the CEC, California's 2022 fuel sales totaled an estimated 13,640 million gallons of gasoline and 3,601 million gallons of diesel fuel, and Riverside County fuel sales totaled an estimated 981 million gallons of gasoline and 173 million gallons of diesel fuel in 2022 (CEC 2023b). As shown in Table 5.4-4, Riverside County 2022 Transportation Fuel Consumption, Riverside County experienced a per

capita consumption rate of 475 gallons of fuel per person per year in 2022. It should be noted that county energy consumption rates were retrieved to characterize existing energy consumption because that is the smallest scale at which energy consumption estimates are publicly available.

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Table 5.4-4	Riverside County	/ 2022 Transportatio	on Fuel Consumption

Parameter	Quantity
Transportation Fuel Consumption (gallons per year)	1,154,000,000
Riverside County Population	2,430,976
Per Capita Transportation Fuel Consumption (gallons per year)	475
Source: CEC 2023b; DOF 2023.	

5.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- E-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- E-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.4.3 Environmental Impacts

5.4.3.1 METHODOLOGY

Construction

Construction would entail demolition, site preparation, grading, utilities trenching, building construction, paving, architectural coating, field installation, track surfacing, and finishing and landscaping activities across approximately 11 acres. The proposed project construction would occur over 12 months from June 2025 through June 2026.

Operational Phase

The proposed project would entail the renovation of the existing track and field with the addition of field lighting, public address (PA) system, scoreboard, field house, and bleachers to accommodate La Sierra HS sports events. The proposed project would not impact student or staff capacity at La Sierra HS and would accommodate existing sporting activities that are currently taking place off-campus at neighboring schools.

Therefore, future sports events at the renovated track and field would result in a reduction in total vehicle miles traveled (VMT) because the proposed project would be closer to most of the homes in the attendance area of La Sierra HS as compared to the field at Norte Vista High School. Upon project completion, a capacity-level event could generate a maximum of 1,680 daily vehicle trips (Appendix 5.7-1). However,

capacity-level events would not occur frequently, and the proposed schedule for sports events would be similar to the current sports schedule. Since vehicle trips to attend games and practices would occur regardless of the proposed project, the proposed project would not result in any new vehicle trips to the local roadway network during operation. Moreover, the proposed project's energy consumption would be limited to new lighting and mechanical equipment, such as the PA system or other equipment included in the 5,500square-foot field house. Considering the extent of new building space, lighting, and mechanical equipment anticipated for the proposed project, operational energy impacts would be minimal and are therefore addressed in this analysis qualitatively.

Based on CEQA Guidelines Appendix F, Energy Conservation, to ensure energy implications are considered in project decisions, EIRs include a discussion of the potential impacts of proposed projects, with particular emphasis on avoiding or reducing wasteful, unnecessary, or inefficient use of energy resources as applicable. Environmental effects may include a proposed project's energy requirements and its energy use efficiencies by amount and fuel type during construction; the effects of a proposed project on local and regional energy supplies; the effects of a proposed project on peak and base period demands for electricity and other forms of energy; the degree to which a proposed project complies with existing energy standards; the effects of a proposed project on energy resources; and a proposed project's projected transportation energy use requirements and its overall use of efficient transportation alternatives, if applicable.

To assist in analyzing whether the proposed project's energy consumption is considered wasteful, inefficient, or unnecessary, the following energy conservation goals from Appendix F of the CEQA Guidelines are used:

- Decrease overall per capita energy consumption.
- Decrease reliance on fossil fuels such as coal, natural gas, and oil.
- Increase reliance on renewable energy sources.

Though these energy conservation goals are used in this analysis to determine whether long-term operations of the proposed project would result in wasteful, inefficient, or unnecessary energy consumption, they are not considered significance thresholds. Therefore, though a project may result in an increase in per capita energy consumption, it does not necessarily mean that a project would result in wasteful, inefficient, or unnecessary energy consumption. This analysis focuses on whether the use of that energy resource is carried out in a wasteful, inefficient, or unnecessary manner in the context of the Appendix F energy conservation goals and explores whether mitigation may be warranted to ensure that the use of energy resources is not considered wasteful, inefficient, or unnecessary.

The provided energy and fuel usage information for the proposed project are based on the following:

- **On-Road Vehicle Fuel Usage.** Fuel usage associated with operation-related vehicle trips and construction-related vehicle trips (i.e., worker and vendor trips) is based on fuel usage data obtained from EMFAC2021, version 1.0.2 (see Appendix 5.2-1).
- Off-Road Equipment Fuel Usage. Fuel usage for construction-related off-road equipment are based on fuel usage data obtained from OFFROAD2021, version 1.0.5, and on the equipment mix and

operations anticipated for the proposed project (see the methodology discussion under Section 5.2.3.1, *Methodology*, of Section 5.2, *Air Quality*, for details).

5.4.3.2 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.4-1: The proposed project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. [Threshold E-1]

Short-Term Construction Impacts

Construction of the proposed project would create temporary demands for electricity. Natural gas is not generally required to power construction equipment, and therefore is not anticipated during construction phases. Electricity use would fluctuate according to the phase of construction. Additionally, it is anticipated that most electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities.

Construction of the proposed project would also temporarily increase demands for energy associated with transportation fuels. Transportation energy use depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. Energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. It is anticipated that most off-road construction equipment, such as those used during demolition and grading, would be gasoline or diesel powered. In addition, all operation of construction equipment would cease upon completion of project construction.

To limit wasteful and unnecessary energy consumption, the construction contractors would also be required to minimize nonessential idling of construction equipment in accordance with the 13 CCR, Article 4.8, Chapter 9, Section 2449. Compliance with this regulation would limit nonessential idling of diesel-powered off-road equipment to five minutes or fewer. Moreover, construction contractors are incentivized to minimize nonessential idling with the rise of fuel costs.

Energy resources consumed during construction of the proposed project were estimated and are provided in Table 5.4-5, *Proposed Project Construction Energy Consumption*.

		Quantity	
Parameter	Gasoline (gallons)	Diesel (gallons)	Electricity (kWh)
Construction Worker Transportation Fuel Consumption	3,188	4	740
Construction Vendor Truck Fuel Consumption	119	2,072	0
Construction Haul Truck Fuel Consumption	0	19	0
Construction Off-Road Equipment Fuel Construction	67	44,128	0
TOTAL	3,374	46,223	740
Source: Appendix 5.2-1.			

Table 5.4-5Proposed Project Construction Energy Consumption

It is anticipated that the construction equipment would be well maintained and meet the appropriate tier ratings per EPA emissions standards so that adequate energy-efficiency level is achieved. Construction trips would not result in unnecessary use of energy since the project site is centrally located and is served by numerous regional circulation systems (e.g., State Route [SR]-91) that provide the most direct routes from various areas of the region. Therefore, construction of the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. This impact would be less than significant.

Long-Term Impacts During Operation

Operation of the proposed project would create demand for electricity and natural gas for building energy use and demand for electricity, compressed natural gas, diesel, and gasoline for vehicle transportation. Operational use of electricity and natural gas in buildings would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; use of on-site equipment and appliances; and lighting. As discussed under Section 5.4.3.1, *Methodology*, the following energy conservation goals are considered to assist in analyzing whether the proposed project's energy consumption could be considered wasteful, inefficient, or unnecessary:

- Decrease overall per capita energy consumption.
- Decrease reliance on fossil fuels such as coal, natural gas, and oil.
- Increase reliance on renewable energy sources.

Electricity Consumption

Electrical service to the project site is provided by SCE through connections to existing off-site and on-site electrical lines and new on-site infrastructure as needed. The new 5,500-square-foot field house would be required to comply with the current Building Energy Efficiency Standards and CALGreen requirements. Compliance with these standards would generally result in greater energy efficiency than in the existing buildings on-site. Regarding electricity that would be drawn from the grid, electricity utility compliance with the State's RPS program under SB 100 would ensure that the proportion of electricity that is sourced from renewable and carbon-free sources—and consumed by the proposed project—increases until it must be 100 percent in 2045. Project compliance with the California Building Standards Code, CALGreen requirements, and utility compliance with SB 100 would ultimately result in incremental shifts away from reliance on fossil

fuels and toward a greater reliance on renewable energy sources. Overall, the proposed project would decrease reliance on fossil fuels and increase reliance on renewable energy sources. Therefore, the proposed project's electricity consumption would not be considered wasteful, inefficient, or unnecessary, and this impact would be less than significant.

Natural Gas Consumption

Each version of the California Building Standards Code has built on the energy efficiency performance of the last—i.e., a building designed compliant with the minimum requirements of the 2019 Code would consume less energy than the same building designed compliant with the 2016 Code, and a building designed to the 2022 Code would consume less energy than that of the 2019 Code—future iterations of the California Building Standards Code are assumed to achieve greater energy efficiency performance. The proposed project would be required to comply with the latest California Building Standards Code and CALGreen requirements that apply at the time of design approval for including passive energy efficiency design to reduce potential wasteful, inefficient, or unnecessary consumption of natural gas. Moreover, the current 2022 California Energy Code—Part 6 of the California Building Standards Code—is structured in a way that includes mandatory requirements for all projects but allows building designs to demonstrate compliance through either the Prescriptive Requirements or Performance Pathway.

The prescriptive requirements contain various prescribed features, such as solar water heaters, heat pumps, solar panel arrays, and battery storage, depending on the building occupancy types and climate zone. For instance, grocery, office, financial institution, unleased tenant space, retail, school, warehouse, auditorium, convention center, hotel, motel, library, medical office building/clinic, restaurant, and theater occupancy types normally require both solar and battery storage systems under the prescriptive requirements. Under the prescriptive requirements, a new development's building design is called the "standard design building," which represents the energy-efficiency performance of that building if it included all prescribed features (e.g., solar, battery storage) under the mandatory requirements and prescriptive requirements.

A project may instead demonstrate compliance using the mandatory requirements and performance pathway without including all prescribed features, such as solar or battery storage; however, that building design must match or exceed the energy efficiency performance of the standard design building. In other words, if a project would be required to include solar and battery storage under the prescriptive requirements, it can choose to demonstrate compliance using the performance pathway, and not include solar and battery storage so long as it can show that it would achieve the same overall energy efficiency performance as if solar and battery storage were included. As a result of required compliance with the California Energy Code, the proposed project's natural gas consumption related to the space and water heating needs of the new field house is anticipated to be minimal.

Moreover, natural gas consumed by the proposed project would serve the La Sierra HS and local community by supporting events after school hours. In other words, natural gas consumed for the proposed project would be necessary for the proposed project's operation, and the consumption thereof would not be considered wasteful, inefficient, or unnecessary.

Under compliance with the California Building Standards Code and California Energy Code, operation of the proposed project would decrease reliance on fossil fuels for space and water heating and shift a greater proportion of building energy needs to electricity, which will incrementally increase the proposed project's reliance on renewable energy sources through electricity utility compliance with SB 100. Therefore, the proposed project's natural gas consumption would not be considered wasteful, inefficient, or unnecessary, and this impact would be less than significant.

Transportation Fuel Consumption

Operation of the proposed project would consume transportation energy from the use of motor vehicles associated with students, staff, and visitors to the renovated track and field. However, the proposed project would not increase student capacity or staffing and would primarily be utilized for sporting activities that are currently taking place off-campus at neighboring schools. Therefore, the proposed project would not result in additional trips or an increase in VMT and would not result in additional reliance on fossil fuel consumption.

Because of State and federal vehicle fuel efficiency standards, the average fuel efficiency for vehicles used by students, staff and visitors of the proposed project is anticipated to improve with each year as older and less fuel-efficient vehicles are retired and replaced with newer, more fuel-efficient vehicles or vehicles powered by alternative fuel sources (e.g., electricity, hydrogen). Therefore, the proposed project is anticipated to result in lower per capita transportation fuel consumption. Moreover, incremental vehicle fleet turnover in future years would decrease reliance on fossil fuels and slowly shift a greater proportion of transportation energy needs to electricity, which will incrementally increase the proposed project's reliance on renewable energy sources through electricity utility compliance with SB 100.

Summary

Overall, regulatory compliance (e.g., Building Energy Efficiency Standards, CALGreen, RPS, and CAFE standards) will increase building energy efficiency and vehicle fuel efficiency and reduce building energy demand and transportation-related fuel usage. Additionally, the proposed project would be designed in compliance with the latest energy efficiency requirements, encourage active transportation-related energy demands overall and demands on nonrenewable sources of energy. Implementation of the proposed project would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Impact 5.4-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. [Threshold E-2]

Applicable plans relevant to the proposed project include the California RPS Program.

California Renewable Portfolio Standard Program

The state's electricity grid is transitioning to renewable energy under California's RPS Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. In general, California has RPS requirements of 40 percent by 2024 (SB 350), 50 percent by 2026 (SB 100), 60 percent by 2030 (SB 100), and 100 percent by 2045 (SB 100). SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as SCE, whose compliance with RPS requirements would contribute to the State of California objective of transitioning to renewable energy. The proposed project would comply with the current and future iterations of the Building Energy Efficiency Standards and CALGreen, which are incrementally improving with each code cycle to support building electrification and use of on-site renewable energy resources. Because the proposed project would be in compliance with applicable Building Energy Efficiency Standards and CALGreen requirements that help reduce the energy demand placed on SCE, the proposed project would not conflict with the California RPS Program and this impact would be less than significant.

Level of Significance Before Mitigation: Less than significant.

5.4.4 Cumulative Impacts

The areas considered for cumulative impacts to electricity and natural gas supplies and facilities are the SCE and SoCalGas service areas. Other projects in the SCE and SoCalGas service areas would be subject to existing regulations, including the California Building Standards Code, which requires new buildings to increase their energy efficiency design. Incremental improvements in the California Building Standards Code attempt to align new development design, including that of the proposed project, with the State's goals for carbon neutrality. Cumulative impacts would be less than significant, and impacts would not be cumulatively considerable.

5.4.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, energy impacts would be less than significant: 5.4-1 and 5.4-2.

5.4.6 Mitigation Measures

No mitigation measures are required.

5.4.7 Level of Significance After Mitigation

All impacts with respect to energy resources are less than significant.

5.4.8 References

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5. Environmental Analysis

5.5 GREENHOUSE GAS EMISSIONS

This section of the Draft environmental impact report (DEIR) evaluates the potential for implementation of the proposed project to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough to result in a measurable increase in global concentrations of GHGs, climate change impacts of a project are considered on a cumulative basis. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD) Working Group and the California Air Resources Board (CARB). GHG emissions modeling was conducted using the California Emissions Estimator Model (CalEEMod), version 2022.1, and model outputs are in Appendix 5.2-1, *Air Quality and Greenhouse Gas Emissions Modeling Data*, of this DEIR. Cumulative impacts related to GHG emissions are based on the State GHG reduction goals.

This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators; constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1, which would include renovating the track and field; and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

Terminology

The terms are used throughout this chapter.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- Global warming potential (GWP). Metric used to describe how much heat a molecule of a GHG absorbs relative to a molecule of carbon dioxide (CO₂) over a given period of time (20, 100, and 500 years). CO₂ has a GWP of 1.
- **Carbon dioxide-equivalent (CO₂e).** The standard unit to measure the amount of GHGs in terms of the amount of CO₂ that would cause the same amount of warming. CO₂e is based on the GWP ratios between the various GHGs relative to CO₂.
- **MTCO**₂**e.** Metric ton of CO₂e.
- **MMTCO₂e.** Million metric tons of CO₂e.

5.5.1 Environmental Setting

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is

5. Environmental Analysis GREENHOUSE GAS EMISSIONS

fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs water vapor, carbon dioxide (CO₂), methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contributes to global warming to a lesser extent are nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).^{1,2} The major GHGs applicable to the proposed project are briefly described.

- **Carbon dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- Methane (CH₄) is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in landfills and water treatment facilities.
- Nitrous oxide (N₂O) is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWPs of GHG emissions are shown in Table 5.5-1, *GHG Emissions and Their Relative Global Warming Potential Compared to CO*₂. The GWP is used to convert GHGs to CO₂-equivalence (CO₂e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under the IPCC Fourth Assessment Report's (AR4) GWP values for CH₄, 10 MT of CH₄ would be equivalent to 250 MT of CO₂.

¹ Water vapor (H₂O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals); however, water vapor is not considered a pollutant because it is considered part of the feedback loop rather than a primary cause of change.

² Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. The share of black carbon emissions from transportation is dropping rapidly and is expected to continue to do so between now and 2030 as a result of California's air quality programs. The remaining black carbon emissions will come largely from woodstoves/fireplaces, off-road applications, and industrial/commercial combustion (CARB 2022a). However, state and national GHG inventories do not include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

Environmental Analysis **GREENHOUSE GAS EMISSIONS**

Table 5.5-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO ₂			
GHGs	Fourth Assessment Report Global Warming Potential Relative to COal	Fifth Assessment Report Global Warming Potential Relative to COal	Sixth Assessment Report Global Warming Potential Relative to COal
01103			
Carbon Dioxide (CO ₂)	1	1	1
Methane (CH ₄) ²	25	28	30
Nitrous Oxide (N ₂ O)	298	265	273

Sources: IPCC 2007, 2013, and 2022.

Notes: The IPCC published updated GWP values in its Sixth Assessment Report (AR6) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO2. However, GWP values identified in AR4 are used in CalEEMod. Therefore, this analysis utilizes AR4 GWP values.

Based on 100-year time horizon of the GWP of the air pollutant compared to CO2.

² The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO2 is not included.

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities.

The IPCC's recent Sixth Assessment Report (AR6) summarizes the latest scientific consensus on climate change. It finds that atmospheric concentrations of CO_2 have increased by 50 percent since the industrial revolution and continue to increase at a rate of two parts per million each year. By the 2030s, and no later than 2040, the world will exceed 1.5°C (2.7°F) warming (CARB 2022a). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. Human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climatechange scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in the frequency of warm spells and heat waves over most land areas.

5. Environmental Analysis GREENHOUSE GAS EMISSIONS

- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

Potential Climate Change Impacts for California

There is at least a greater than 50 percent likelihood that global warming will reach or exceed 1.5°C in the near term, even for the very low GHG emissions scenario (IPCC 2023). Climate change is already impacting California and will continue to affect it for the foreseeable future. For example, the average temperature in most areas of California is already 1°F higher than historical levels, and some areas have seen average increases in excess of 2°F (CalOES 2020). The California Fourth Climate Change Assessment identifies the following climate change impacts under a business-as-usual scenario:

- Annual average daily high temperatures in California are expected to rise by 2.7°F by 2040, 5.8°F by 2070, and 8.8°F by 2100 compared to observed and modeled historical conditions. These changes are statewide averages. Heat waves are projected to become longer, more intense, and more frequent.
- Warming temperatures are expected to increase soil moisture loss and lead to drier seasonal conditions. Summer dryness may become prolonged, with soil drying beginning earlier in the spring and lasting longer into the fall and winter rainy season.
- High heat increases the risk of death from cardiovascular, respiratory, cerebrovascular, and other diseases.
- Droughts are likely to become more frequent and persistent through 2100.³
- Climate change is projected to increase the strength of the most intense precipitation and storm events affecting California.
- Mountain ranges in California are already seeing a reduction in the percentage of precipitation falling as snow. Snowpack levels are projected to decline significantly by 2100 due to reduced snowfall and faster snowmelt. California's water storage system is designed with the expectation that snow will stay frozen for many months, and that as it melts, it will be stored in a series of reservoirs and dams, many of which are used to generate electricity. Changing waterfall patterns therefore impact both water supply and electricity supply.
- Marine layer clouds are projected to decrease, though more research is needed to better understand their sensitivity to climate change.

³ Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016 and unprecedented dry years in 2014 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years from 2012 to 2015 (OEHHA 2018).

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- Extreme wildfires (i.e., fires larger than 10,000 hectares or 24,710 acres) would occur 50 percent more frequently. The maximum area burned statewide may increase 178 percent by the end of the century. Drought and reduced water supplies can increase wildfire risk.
- Exposure to wildfire smoke is linked to increased incidence of respiratory illness.
- Sea level rise is expected to continue to increase erosion of beaches, cliffs, and bluffs. (CalOES 2020)

Global climate change risks to California are shown in Table 5.5-2, *Summary of GHG Emissions Risks to California*, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

Impact Category	Potential Risk
Public Health Impacts	 Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels Deaths due to extreme heat
Water Resources Impacts	 Decreasing Sierra Nevada snowpack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	 Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	 Accelerated sea-level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	 Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pests and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand
Sources: CEC 2006. 2009: CCCC 2012: CNRA 2014: CalOES 2020.	

Table 5.5-2 Summary of GHG Emissions Risks to California

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5.5.1.1 REGULATORY BACKGROUND

Federal Regulations

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009a).

To regulate GHGs from passenger vehicles, the EPA was required to issue an endangerment finding (USEPA 2009b). The finding identified emissions of six key GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, according to guidance by the South Coast AQMD, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO₂e per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2017 to 2026)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (mpg) in 2025. However, on March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 mpg for model year 2026 vehicles (85 Federal Register 24174 (April 30, 2020)).

On December 21, 2021, under the direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, the National Highway Traffic Safety Administration announced new proposed fuel standards on March 31, 2022. Fuel efficiency under the new standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annual for model year 2026. Overall, the new CAFE standards require a fleet average of 49 mpg for passenger vehicles and light trucks for model year 2026, which would be a 10 mpg increase relative to model year 2021 (NHTSA 2022).

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State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05, EO B-30-15, EO B-55-18, Assembly Bill 32 (AB 32), AB 1279, Senate Bill 32 (SB 32), and SB 375.

Executive Order S-03-05

EO S-03-05 was signed June 1, 2005, and set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05. CARB prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

Executive Order B-30-15

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, *Safeguarding California*, to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the executive order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

Executive Order B-55-18

EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later

5. Environmental Analysis GREENHOUSE GAS EMISSIONS

than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279

AB 1279, signed by Governor Newsom in September 2022, codifies the carbon neutrality targets of EO B-55-18 for the year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels for anthropogenic GHG emissions. CARB will be required to update the scoping plan to identify and recommend measures to achieve the net-zero and GHG emissions-reduction goals.

2022 Climate Change Scoping Plan

CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State's anthropogenic GHG emissions (CARB 2022a). The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18 (discussed below), and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. This plan expands upon earlier Scoping Plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon, including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the IPCC's recent AR6, and the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB's 2022 Scoping Plan identifies strategies, as shown in Table 5.5-3, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process toward the State's carbon neutrality goals.

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide electric vehicle charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
Vehicle Miles Traveled Reduction	Reduce or eliminate minimum parking standards.
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands by implementing land use policies that guide development toward

 Table 5.5-3
 Priority Strategies for Local Government Climate Action Plans
i nentj otrategios
infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements)
Adopt all-electric new construction reach codes for residential and commercial uses.
Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as EnergyStar-rated equipment and equipment controllers).
Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances.
Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing)
Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Table 5.5-3 Priority Strategies for Local Government Climate Action Plans

For residential and mixed-use development projects, CARB recommends this first approach to demonstrate that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

- Transportation Electrification
 - Provide electric vehicle (EV) charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.
- Vehicle Miles Traveled (VMT) Reduction
 - Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
 - Does not result in the loss or conversion of the State's natural and working lands.
 - Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS).
 - Reduces parking requirements by:
 - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
 - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or

- For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
- At least 20 percent of the units are affordable to lower-income residents.
- Result in no net loss of existing affordable units.
- Building Decarbonization
 - Uses all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.

The second approach to project-level alignment with State climate goals is net-zero GHG emissions, especially for new residential development. The third approach is to align with GHG thresholds of significance, which many local air quality management and air pollution control districts have developed or adopted (CARB 2022a).

Senate Bill 375

SB 375, the Sustainable Communities and Climate Protection Act, was adopted in 2008 to connect the GHG emissions reduction targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPO). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial counties. Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018 that became effective in October 2018. All SCSs adopted after October 1, 2018, are subject to these new targets. CARB's updated SB 375 targets for the SCAG region were an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32) while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of "percent per capita" reductions in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies, such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into

proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

Transportation Sector–Specific Regulations

Advanced Clean Fleets and Advanced Clean Trucks

CARB adopted the Advanced Clean Fleets (ACF) regulation in 2023 to accelerate the transition to zeroemission medium- and heavy-duty vehicles. In conjunction with the Advanced Clean Trucks regulation, the ACF regulations helps to ensure that medium- and heavy-duty zero-emission vehicles are brought to the market by requiring certain fleets to purchase ZEVs. The ACF ZEV phase-in approach, which provides initial focus where the best fleet electrification opportunities exist, sets clear targets for regulated fleets to make a full conversion to ZEVs and creates a catalyst to accelerate development of a heavy-duty public charging infrastructure network.

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that set even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. (See also the previous discussion in federal regulations under "Update to Corporate Average Fuel Economy Standards [2017 to 2026].")

In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZEVs into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new low-carbon fuel standard for transportation fuels sold in the state. EO S-01-07 set a declining standard for GHG emissions measured in grams of CO₂e per unit of fuel energy sold in California. The low-carbon fuel standard required a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applied to refiners, blenders, producers, and importers of transportation fuels, and used market-based mechanisms to allow these providers to choose the most economically feasible methods for reducing emissions during the "fuel cycle."

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and

the California Fuel Cell Partnership to establish benchmarks to accommodate ZEVs in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). EO B-16-2012 also directed the number of ZEVs in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles were ZE by 2015 and at least 25 percent by 2020. The executive order also established a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

Executive Order N-79-20

On September 23, 2020, Governor Newsom signed EO N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The EO's goal for the state is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.

Renewables Portfolio: Carbon Neutrality Regulations

Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. EO S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production decreases indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon) was signed into law in September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also sets a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consists of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. SB 1020 provides interim RPS targets (90 percent renewable energy by 2035 and 95 percent renewable energy by 2040) and requires renewable energy and zero-carbon resources to reach 100 percent clean electricity by 2045.

Energy Efficiency Regulations

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 Part 6 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods.

The CEC adopted the 2022 Building Energy Efficiency Standards on August 11, 2021, and it went into effect on January 1, 2023. The 2022 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, strengthen ventilation standards, etc. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system for multifamily residential occupancies and nonresidential occupancies such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen standards became effective on January 1, 2023.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Diversion Regulations

AB 939: Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code Section 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the Act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

AB 1327

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code Section 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

AB 1826

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

Water Efficiency Regulations

SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water use by 2020 compared to 2005 baseline use.

AB 1881: Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves, to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Short-Lived Climate Pollutant Reduction Strategy

On September 19, 2016, the governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and methane. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017). In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these charbroilers by over 80 percent (CARB 2017). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the South Coast Air Basin.

Regional Regulations

SCAG's 2024-2050 RTP/SCS

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan (RTP/SCS). For the SCAG region, the 2024-2050 RTP/SCS, Connect SoCal, was adopted on April 4, 2024, and is an update to the 2020-2045 RTP/SCS. In general, the RTP/SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through the horizon year 2050 (SCAG 2024). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. It also forecasts that implementation of the plan will reduce VMT per capita in year 2050 by 6.3 percent compared to baseline conditions for that year. Connect SoCal includes a "Core

Vision" that centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2024).

City of Riverside General Plan

The Air Quality Element of the City of Riverside General Plan includes the following policies related to GHG emissions:

- Policy AQ-1.3. Separate, buffer and protect sensitive receptors from significant sources of pollution to the greatest extent possible.
- Policy AQ-1.7. Support appropriate planned residential developments and infill housing, which reduce vehicle trips.
- **Policy AQ-1.13.** Encourage employment centers that are nonpolluting or extremely low-polluting and do not draw large numbers of vehicles in proximity to residential uses.
- **Policy AQ-1.18.** New residential subdivisions shall be designed to encourage "walkable" neighborhoods with pedestrian walkways and bicycle paths to facilitate pedestrian travel.
- **Policy AQ-2.3.** Cooperate with local, regional, State and Federal jurisdictions to reduce vehicle miles traveled (VMT) and motor vehicle emissions through job creation in job poor areas.
- **Policy AQ-2.6.** Develop trip reduction plans that promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking.
- Policy AQ-2.18. Manage the City's transportation fleet fueling standards to achieve the best alternate fuel fleet mix possible.
- 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)
- Policy AQ-7.7. Support legislation that promotes cleaner industry, clean fuel vehicles and more efficient burning engines and fuels.
- Policy AQ-8.4. Develop a Climate Action Plan that sets a schedule to complete an inventory of municipal and private greenhouse gas (GHG) emissions, sets targets for reductions and methodologies to reach targets.
- Policy AQ-8.15. Aggressively support programs at the AQMD that reduce GHG and particulate matter generation in the Los Angeles and Orange County regions to improve air quality and reduce pollution in Riverside.

5.5.1.2 EXISTING CONDITIONS

California's GHG Sources and Relative Contribution

In 2022, the statewide GHG emissions inventory was updated for 2000 to 2020 emissions using the GWPs in IPCC's AR4, and California produced 369.2 MMTCO₂e GHG emissions, 35.3 MMTCO₂e lower than 2019 levels and 61.8 MMTCO₂e below the 2020 GHG limit of 431 MMTCO₂e (CARB 2022b). The 2019 to 2020 decrease in emissions is likely due in large part to the impacts of the COVID-19 pandemic. Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2014, statewide GHG emissions dropped below the 2020 GHG limit and have remained below the limit since that time. Per capita GHG emissions in California have dropped from a 2001 peak of 13.8 metric tons per person to 9.3 metric tons per person in 2020, a 33 percent decrease (CARB 2022b).

California's transportation sector remains the largest generator of GHG emissions, producing 37 percent of the state's total emissions in 2020. Industrial sector emissions made up 20 percent and electric power generation made up 16 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (4 percent), agriculture and forestry (8.6 percent), high-GWP gases (5.8 percent), and recycling and waste (2 percent) (CARB 2022b).

Transportation emissions continued to decline for the past three consecutive years with the rise of fuel efficiency in the passenger vehicle fleet and increase in battery electric vehicles. The deployment of renewable and/or less-carbon-intensive resources and higher energy efficiency standards have facilitated the continuing decline in fossil fuel electricity generation. The industrial sector trend has been steadier in recent years but saw a decrease of 7.1 MMTCO₂e in 2020. Commercial and residential emissions saw a decrease of 1.7 MMTCO₂e. Emissions from high-GWP gases have continued to increase as they replace ozone-depleting substances that are being phased out under the 1987 Montreal Protocol. Emissions from other sectors have remained mostly constant in recent years. Overall trends in the inventory also continue to demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) is declining. From 2000 to 2020, the carbon intensity of California's economy decreased by 49 percent while the gross domestic product increased by 56 percent (CARB 2022b).

5.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

5.5.2.1 GREENHOUSE GAS EMISSIONS SIGNIFICANCE THRESHOLD

South Coast AQMD adopted a significance threshold of 10,000 MTCO₂e per year for permitted (stationary) sources of GHG emissions for which South Coast AQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD convened a GHG CEQA Significance Threshold Working Group. Based on the last Working Group meeting in September 2010 (Meeting No. 15), the South Coast AQMD Working Group identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010a). It should be noted that the following tiered approach has not been formally adopted by South Coast AQMD.

- **Tier 1.** If a project is exempt from CEQA, project-level and contribution to significant cumulative GHG emissions are less than significant.
- Tier 2. If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (e.g., city or county), project-level and contribution to significant cumulative GHG emissions are less than significant.
- Tier 3. If GHG emissions are less than the screening-level criterion, project-level and contribution to significant cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, South Coast AQMD Working Group requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The South Coast AQMD Working Group decided that because construction activities would result in a "one-time" net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation. South Coast AQMD Working Group identified a screening-level threshold of 3,000 MTCO₂e annually for all land use types (bright-line screening level). The bright-line screening-level criteria are based on a review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds. Therefore, projects that do not exceed the bright-line threshold would have a nominal and less than cumulatively considerable impact on GHG emissions. South Coast AQMD Working Group recommends use of the 3,000 MTCO₂e interim bright-line screening-level criterion for all project types (South Coast AQMD 2010b).

• Tier 4. If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

The South Coast AQMD Working Group's bright-line screening-level criterion of 3,000 MTCO₂e per year is used as the significance threshold for a proposed project. If a proposed project's operational emissions exceed this criterion, GHG emissions would be considered potentially significant before mitigation.

5.5.2.2 MASS EMISSIONS AND HEALTH EFFECTS

On December 24, 2018, in *Sierra Club et al. v. County of Fresno et al.* (2018) 6 Cal.5th 502, Case No. S21978 (Friant Ranch), the California Supreme Court determined that the EIR for the proposed Friant Ranch project failed to adequately analyze the project's air quality impacts on human health. The EIR prepared for the project, which involved a master-planned retirement community in Fresno County, showed that project-related mass emissions would exceed the San Joaquin Valley Air Pollution Control District's regional significance thresholds. In its findings, the California Supreme Court affirmed the holding of the Court of Appeal that EIRs for projects must not only identify impacts to human health, but also provide an "analysis of the correlation between the project's emissions and human health impacts" related to each criterion air pollutant that exceeds the regional significance thresholds or explain why it could not make such a connection. In general, the ruling focuses on the correlation of emissions of toxic air contaminants and criteria air pollutants and their impact to human health.

In 2009, the EPA issued an endangerment finding for six GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆) in order to regulate GHG emissions from passenger vehicles. The endangerment finding is based on evidence that shows an increase in mortality and morbidity associated with increases in average temperatures, which increase the likelihood of heat waves and ozone levels. The effects of climate change are identified in Table 5.5-2. Though identified effects such as sea level rise and increased extreme weather can indirectly impact human health, neither the EPA nor CARB has established ambient air quality standards for GHG emissions. The State's GHG reduction strategy outlines a path to avoid the most catastrophic effects of climate change and includes goals and objectives that are based on the State's path toward reducing statewide cumulative GHGs as outlined in AB 32, SB 32, and EO S-03-05.

Further, because no single project is large enough to result in a measurable increase in global concentration of GHG emissions, climate change impacts of a project are considered on a cumulative basis. Without federal or State ambient air quality standards for GHG emissions, and given the cumulative nature of GHG emissions and the South Coast AQMD's significance thresholds that are tied to reducing the state's cumulative GHG emissions, it is not feasible at this time to connect the project's specific GHG emissions to the potential health impacts of climate change.

5.5.3 Environmental Impacts

5.5.3.1 METHODOLOGY

This GHG evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG impacts are likely in conjunction with the Proposed Project. South Coast AQMD has published guidelines for analyzing and mitigating environmental impacts, and they were used in this analysis. Quantified emissions included in this analysis in this section are modeled using CalEEMod, version 2022.1.

Regional GHG emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod compiles an emissions inventory of construction (off-gas emissions, on-road emissions, and off-road emissions), area sources, indirect emissions from energy use, mobile sources, indirect

emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only). The following is a summary of the assumptions used for the proposed project analysis.

Construction

Construction would entail demolition, site preparation, grading, utilities trenching, building construction, paving, architectural coating, field installation, track surfacing, and finishing and landscaping activities across approximately 11 acres. The proposed project construction would occur over 12 months from June 2025 through June 2026.

Operation

The proposed project would entail the renovation of the existing track and field with the addition of field lighting, PA system, scoreboard, field house, and bleachers to accommodate La Sierra HS sports activities. The proposed project would not impact student or staff capacity at La Sierra HS and would accommodate existing sporting activities that are currently taking place off-campus at neighboring schools. For example, the La Sierra HS football team currently utilizes the Norte Vista High School (NVHS) stadium for home games. Therefore, future sports events at the renovated track and field would result in a reduction in total VMT because the proposed project would be closer to most of the homes in the attendance area of La Sierra HS as compared to the field at NVHS.

Upon project completion, a capacity-level event could generate a maximum of 1,680 daily vehicle trips (Appendix 5.7-1). However, capacity-level events would not occur frequently, and the proposed schedule for sports events would be similar to the current sports schedule. Since vehicle trips to attend games and practices would occur regardless of the proposed project, the proposed project would not result in any new vehicle trips to the local roadway network during operation. Moreover, the proposed project's energy consumption would be limited to new lighting and mechanical equipment, such as the PA system or other equipment included in the 5,500-square-foot field house. Considering the extent of new building space, lighting, and mechanical equipment anticipated for the proposed project, operational GHG emissions would be minimal and are therefore addressed in this analysis qualitatively.

Life-cycle emissions are not included in the GHG analysis, consistent with California Resources Agency directives.⁴ Black carbon emissions are not included in the GHG analysis because CARB does not include this short-lived climate pollutant in the state's SB 32/AB 1279 inventory but treats it separately.⁵ Additionally, though not anticipated, industrial sources of emissions that require a permit from South Coast AQMD

⁴ Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses were not warranted for projectspecific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (CEQA Guidelines Section 15145).

⁵ Particulate matter emissions, which include black carbon, are analyzed in Section 5.3, *Air Quality*. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017).

(permitted sources) are not included in the proposed project community inventory since they have separate emission reduction requirements. Quantitative GHG modeling for construction is included in Appendix 5.2-1 of this DEIR.

5.5.3.2 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.5-1: The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. [Threshold GHG-1]

Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is by definition a cumulative environmental impact.

As mentioned previously, implementation of the proposed project would result in the renovation of the existing track and field and improvements to the parking lot. The proposed project would not impact student or staff capacity at La Sierra HS, and the new track and field improvements would be utilized by sporting activities that are currently taking place off-campus at neighboring schools. Following buildout, operation of the proposed project would not result in an increase in vehicle trips to the local roadway network because the track and field improvements would be utilized by existing sporting activities that currently take place at other schools. The relocation of these sporting activities to the La Sierra HS campus would avoid the need for students and staff to use neighboring schools for sporting practices and games, resulting in a potential reduction in mobile source GHG emissions during operation. Moreover, the introduction of 5,500 square feet field house and its associated uses would constitute a nominal increase in energy source GHG emissions. In addition, GHG emissions from building energy use would be minimized because the new building space would be designed to meet modern building energy codes, including the current California Building and Energy Efficiency Standards. Because mobile sources (e.g., vehicle trips) typically constitute the vast majority of operational GHG emissions from land use development projects, operation of the proposed project is not anticipated to result in a net increase in operational GHG emissions.

As shown in Table 5.5-4, *Project-Related Operational GHG Emissions*, net annual GHG emissions generated by operation of the proposed project would not generate annual emissions that exceed the South Coast AQMD bright-line threshold of 3,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year, and this impact would be less than significant (South Coast AQMD 2010). The annual average construction emissions were amortized over 30 years and included in the emissions inventory to account for one-time GHG emissions from the construction phase of the proposed project.

Table 5.5-4	Project-Related Annual GHG Emissions

	GHG Emissions ¹				
Source	MTCO ₂ e Per Year	Percent Proportion			
Operation	-	-			
Amortized Construction Emissions ¹	16	100%			
Total	16	100%			
South Coast AQMD Bright-Line Threshold	3,000 MTCO2e/Yr	NA			
Exceeds Bright-Line Threshold?	No	NA			

Source: CalEEMod, Version 2022.1.0. Appendix 5.2-1.

Notes: MTons = metric tons; MTCO2e = metric ton of carbon dioxide equivalent

¹ Total construction emissions of 489 MTCO₂e are amortized over 30 years per South Coast AQMD methodology (South Coast AQMD 2009).

Level of Significance Before Mitigation: Less than significant.

Impact 5.5-2:	The proposed project would not conflict with an applicable plan, policy or regulation
	adopted for the purpose of reducing the emissions of greenhouse gases. [Threshold GHG-
	2]

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's 2022 Scoping Plan and SCAG's RTP/SCS. A consistency analysis with these plans is presented below.

CARB Scoping Plan

CARB's latest Climate Change Scoping Plan (2022) outlines the State's strategies to reduce GHG emissions in accordance with the targets established under AB 32, SB 32, and AB 1279. The Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Statewide strategies to reduce GHG emissions in the 2022 Climate Change Scoping Plan include: implementing SB 100, which expands the RPS to 60 percent by 2030; expanding the Low Carbon Fuel Standards (LCFS) to 18 percent by 2030; implementing the Mobile Source Strategy to deploy zero-emission buses and trucks; implementing the Sustainable Freight Action Plan; implementing the Short-Lived Climate Pollutant Reduction Strategy, which reduces methane and hydrofluorocarbons to 40 percent below 2013 levels by 2030 and black carbon emissions to 50 percent below 2013 levels by 2030; continuing to implement SB 375; creating a post-2020 Cap-and-Trade Program; and developing an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Statewide strategies to reduce GHG emissions include the low carbon fuel standards, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the Corporate Average Fuel Economy standards, and other early action measures as necessary to ensure the State is on target to achieve the GHG emissions reduction goals of AB 32, SB 32, and AB 1279. Vehicles driving to and from the project site would utilize fuel which meets the LCFS requirements, and new vehicles purchased over

the life of the project that are used in association with the proposed project would be compliant with the applicable CAFE standards and benefit from reduced fuel consumption, resulting in subsequent GHG emissions reductions. In addition, new developments are required to comply with the current Building Energy Efficiency Standards and CALGreen mandatory measures. The proposed project would experience incremental energy-source GHG emissions reductions through compliance with these building standards since they are often considered the nation's most stringent energy efficiency standards. The proposed project's GHG emissions would be reduced from compliance with statewide measures that have been adopted since AB 32, SB 32, and AB 1279 were adopted. Therefore, impacts would be less than significant.

SCAG's Regional Transportation Plan / Sustainable Communities Strategy

SCAG adopted the 2024-2050 RTP/SCS, Connect SoCal, in April 2024. Connect SoCal is a long-term plan for Southern California region that details the development, integrated management and operation of transportation systems and facilities that will function as an intermodal transportation network for the SCAG metropolitan planning area (SCAG 2024). This plan outlines a forecasted development pattern that demonstrates how the region can sustainably accommodate needed housing and job centers with multimodal mobility options. The overarching vision is to expand alternatives to driving, advance the transition to cleantransportation technologies, promote integrated and safe transit networks, and foster transit-oriented development in compact and mixed-use developments (SCAG 2024).

In addition, Connect SoCal is supported by a combination of transportation and land use strategies that outline how the region can achieve California's GHG-emission-reduction goals and federal Clean Air Act requirements. The projected regional development, when integrated with the proposed regional transportation network in Connect SoCal, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region.

Connect SoCal does not require that local general plans, projects, or zoning be consistent with the SCS but provides incentives for consistency to governments and developers. It is anticipated that long-term and short-term (i.e., construction) jobs would be absorbed by the local and regional labor force, which would contribute to minimizing passenger vehicle VMT. Moreover, future sports events at the renovated track and field would result in a reduction in total VMT because the proposed project would be closer to most of the homes in the attendance area of La Sierra HS as compared to the field at NVHS. Therefore, the proposed project would be generally consistent with Connect SoCal, and impacts related to consistency with SCAG's Connect SoCal would be less than significant.

Level of Significance Before Mitigation: Less than significant.

5.5.4 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, Impact 5.5-1 is not a project-specific impact, but the proposed project's contribution to a cumulative impact. As shown in Table 5.5-4, the proposed project's net annual operational GHG emissions would be below the South Coast AQMD's significance threshold of 3,000 MT CO₂e per year, which was developed to determine whether an individual project's GHG emissions would be considered cumulatively

considerable. Therefore, project-related GHG emissions and their contribution to global climate change would not be cumulatively considerable, and GHG emissions impacts would be less than significant.

5.5.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, GHG emissions impacts would be less than significant: 5.5-1 and 5.5-2.

5.5.6 Mitigation Measures

No mitigation measures are required.

5.5.7 Level of Significance After Mitigation

All impacts with respect to GHG emissions are less than significant.

5.5.8 References

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5. Environmental Analysis

5.6 NOISE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the La Sierra High School Track and Field (proposed project) to impact the noise environment in the local vicinity. Specifically, this section summarizes relevant federal, state, and local noise guidelines, policies, and standards; reviews noise levels at existing receptor locations; and evaluates potential noise impacts. This evaluation uses procedures and methodologies specified by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The analysis in this section is based in part on the noise modeling data in Appendix 5.6-1 of this DEIR.

This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators; constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1, which would include renovating the track and field; and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

TERMINOLOGY

- Sound. A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- Noise. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level. The value of an equivalent, steady sound level that, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- Statistical Sound Level (L_n). The sound level that is exceeded "n" percent of time during a given sample period. For example, the L₅₀ level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L₁₀ level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and

this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- Day-Night Sound Level (L_{dn} or DNL). The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 pm to 7:00 am.
- Community Noise Equivalent Level (CNEL). The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 pm to 10:00 pm and 10 dB from 10:00 pm to 7:00 am. For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive, that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.
- Peak Particle Velocity (PPV). The peak signal value of an oscillating vibration velocity waveform usually expressed in inches per second (in/sec).
- Sensitive Receptor. Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

Noise and Vibration Fundamentals

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness." Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

Sound Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dBA are detectable under quiet, controlled conditions, and changes of less than 1 dBA are usually indiscernible. A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernable to most people in an exterior environment, and a 10 dBA change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are "felt" more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a

special frequency-dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

Sound Measurement

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, while 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2 , L_8 , and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. These "L" values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance, as discussed below. Other values typically noted during a noise survey are the L_{min} and L_{max} . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, an artificial dB increment is added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an

artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 am to 10:00 pm and 10 dBA for the hours from 10:00 pm to 7:00 am. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 pm and 10:00 pm. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly more restrictive (i.e., higher).

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 190 dBA will rupture the eardrum and permanently damage the inner ear.

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium, such as the ground or a building. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers.

Amplitude

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal, and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage. The units for PPV are normally inches per second (in/sec). Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 5.6-1, *Human Reaction to Typical Vibration Levels*, shows the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Vibration Level Peak Particle Velocity	Human Reaction	Effect on Buildings
0.006-0.019 in/sec	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08 in/sec	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10 in/sec	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings
0.20 in/sec	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwellings – houses with plastered walls and ceilings
0.4–0.6 in/sec	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage
Source: Caltrans 2013		

Table 5.6-1	Human Reaction to	Typical	Vibration	Levels
		J I		

5.6.1 Environmental Setting

5.6.1.1 REGULATORY BACKGROUND

State Regulations

California Code of Regulations

Title 24, Part 11. The State of California's noise insulation standards for nonresidential uses are codified in the California Code of Regulations (CCR), Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA $L_{eq(1hr)}$.

Title 5, Section 14040(q). Under Title 5, the California Department of Education (CDE) regulations require a school district to consider noise in the site selection process. As recommended by CDE guidance, if a school district is considering a potential school site near a freeway or other source of noise, it should hire an acoustical engineer to determine the level of sound that the site is exposed to and to assist in designing the school should that site be chosen.

Local Regulations

City of Riverside General Plan

Principal noise sources in the City of Riverside are from transportation, specifically from major arterial roadways; State Route (SR-) 91, SR-60, and Interstate (I-) 215; train movement along railroad lines; and aircraft overflight noise from Riverside Municipal Airport, Flabob Airport, and March Air Reserve Base.

The City of Riverside's General Plan Noise Element has set forth land use guidelines to protect residential neighborhoods and noise-sensitive receptors such as schools and hospitals from potentially harmful noise sources (Riverside 2022). The noise and land use compatibly criteria are shown in Table 5.6-2, *Noise and Land Use Compatibility Criteria: Riverside General Plan.*

	CNEL (dBA)							
Land Uses	5	56	06	57	0 7	58	0 8	35
		I						<u> </u>
Single-Family Residential	-							
			1					
Infill Single-Family Residential								
Commercial – Motels, Hotels, Transient Lodging								
Commoloidi Motolo, Hotolo, Handoni Louging								
Schools, Libraries, Churches, Hospitals, Nursing Homes								
Amphitheaters, Concert Hall, Auditorium, Meeting Hall								
· · ·								
Sports Arena, Outdoor Spectator Sports							l	
Playground, Neighborhood Parks								
					4			
Golf Courses Riding Stables Water Recreation Cemeteries								
Office Buildings, Businesses, Commercial, Professional			T					
		l						
Industrial, Manufacturing, Utilities, Agricultural								

Table 5.6-2Noise and Land Use Compatibility Criteria: Riverside General Plan

				CNEL (dBA)							
	Land Uses			5	5 60) 6	57	0	75	80	85
Freeway Adjacent Commercial, Office, and Industrial Uses											
Explanator	ry Notes										
	Normally Acceptable: Specific land use is satisfactory, based on the assumption that any building is of normal conventional construction without any special noise insulation requirements.			Normally Unacceptable: New construction or development should general discouraged. If new construction or development not proceed, a detailed analysis of the noise redu requirements must be made and needed noise insulation features included in the design.					generally be opment does se reduction noise		
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.				Cone New not b that r reduc cons analy made in the	ditional constru e under noise re- ce noise truction vsis of n e and ne e design	ly Unact ction or taken, u duction r impacts or devel oise red eeded no	ceptab develop nless it requires to an opmen uction n bise ins	le: can be ments c accepta t does p requirer ulation	should (e demor can be (able lev proceed ments r feature	generally nstrated employed to rel if new d, a detailed nust be es included

Table 5.6-2 Noise and Land Use Compatibility Criteria: Riverside General Plan

Source: Riverside 2015.

* For properties located within airport influence areas, acceptable noise limits for single-family residential uses are established by the Riverside County Airport Land Use Compatibility Plan.

City of Riverside Municipal Code

The City of Riverside regulates and enforces exterior noise standards through Section 7.25.010, Exterior Sound Level Limits, of the Municipal Code. Exterior noise standards are summarized in Table 5.6-3, *Exterior Noise Standards*. The City of Riverside noise regulations are enforced through its Code of Ordinances. The Code provides decibel corrections that shall not exceed the following:

- The exterior noise standard of the applicable land use category, up to 5 dB, for a cumulative period of more than 30 minutes in any hour (L₅₀).
- The exterior noise standard of the applicable land use category, plus 5 dB, for a cumulative period of more than 15 minutes in any hour (L₂₅).
- The exterior noise standard of the applicable land use category, plus 10 dB, for a cumulative period of more than five minutes in any hour (L₈).
- The exterior noise standard of the applicable land use category, plus 15 dB, for the cumulative period of more than one minute in any hour (L₂).

• The exterior noise standard for the applicable land use category, plus 20 dB or the maximum measured ambient noise level (L_{max}), for any period of time.

Section 7.25.010(D) specifically addresses air conditioning noise stating that where the intruding noise source is an air-conditioning unit or refrigeration system, the exterior noise level when measured at the property line must not exceed 60 dBA for units installed before January 1, 1980, and 55 dBA for units installed after January 1, 1980.

Land Use Category	Time Period	Noise Level in dBA
Residential	Night: 10:00 pm to 7:00 am	45
	Day: 7:00 am to 10:00 pm	55
Office/commercial	Any time	65
Industrial	Any time	70
Community support	Any time	60
Public recreation facility	Any time	65
Nonurban	Any time	70

Table 5.6-3 Exterior Noise Standards

Note: If the measured ambient noise level exceeds that permissible within any of the first four noise limit categories, the allowable noise exposure standard shall be increased in five decibel increments in each category as appropriate to encompass the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

Exemptions

Section 7.35.020(B), School Events, of the City of Riverside Municipal Code, states that sanctioned school activities conducted on public or private school grounds including but not limited to school athletic and entertainment events are exempted from the provisions of Chapter 7.35, General Noise Regulations, conducted between the hours of 7:00 a.m. and 11:00 p.m.

Per Section 7.35.020(G), Construction, of the City of Riverside Municipal Code, states that noise sources associated with construction, repair, remodeling, or grading of any real property; provided a permit has been obtained from the City as required; and provided said activities shall not take place between the hours of 7:00 pm and 7:00 am on weekdays, between the hours of 5:00 pm and 8:00 am on Saturdays, or at any time on Sunday or a federal holiday.

Vibration Standards

The City of Riverside does not have specific limits or thresholds for vibration. The FTA provides criteria for acceptable levels of groundborne vibration for various types of buildings. The FTA criteria are used for this analysis. Structures amplify groundborne vibration, and wood-frame buildings, such as typical residential structures, are more affected by ground vibration than heavier buildings. The level at which groundborne vibration is strong enough to cause architectural damage has not been determined conclusively. The most conservative estimates are reflected in the FTA standards shown in Table 5.6-4, *Groundborne Vibration Criteria: Architectural Damage*.

Table 5.0-4 Groundborne Vibration Criteria	: Architectural Damage
Building Structural Category	PPV, in/sec
I. Reinforced-concrete steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Engineered concrete and masonry (no plaster)	0.2
IV. Engineered concrete and masonry (no plaster)	0.12
Source: FTA 2018. PPV = peak particle velocity	

Table E 4 1 Croundharna Vibratian Critaria, Arabitastural Damage

5.6.1.2 **EXISTING CONDITIONS**

The campus is located to the east of La Sierra Avenue; campus buildings are on the southwestern portion, the parking lot is on the northwestern portion, and campus fields are on the northern and eastern portions of the campus. Residential uses, Collett Park, and Collett Elementary School are to the north of the campus; and residential uses are to the east, south, and west of the campus.

The noise environment surrounding the campus is primarily characterized by roadway traffic from La Sierra Avenue, activity from sports practices, children playing at Collett Park, and residential traffic along nearby streets such as Arrowwood Drive, Jones Avenue, and Cochran Avenue. Intermittent noise from the high school (students talking and bells/buzzers) also contributes to the existing ambient noise environment.

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, hospital facilities, houses of worship, open space, and recreation areas where quiet environments are beneficial to the enjoyment, public health, and safety of the community. The nearest sensitive receptors are the surrounding single-family homes to the north, east, and south of the campus, as well as Collett Elementary School to the northeastern corner of the campus.

Ambient Noise Measurements

Short Term

Four short-term (15-minute) measurement locations were selected and measurements conducted around the campus. All measurements were conducted Wednesday, March 20, 2024. All short-term measurements were conducted after school hours.

The short-term sound level meter used (Larson Davis LxT) for noise monitoring satisfies the American National Standards Institute (ANSI) standard for Type 1 instrumentation.¹ The short-term sound level meter was set to "slow" response and "A" weighting (dBA). The meter was calibrated prior to and after each monitoring period. All measurements were at least 5 feet above the ground and away from reflective surfaces. Short-term measurement locations are described below and shown in Figure 5.6-1, Approximate Noise Monitoring Locations, and results are summarized in Table 5.6-5, Short-Term Noise Measurements Summary in A-weighted Sound Levels.

Monitoring of ambient noise was performed using Larson-Davis model LxT sound level meters.

- Short-Term Location 1 (ST-1) was at the end of the cul-de-sac on Cass Street, adjacent to the residence on 4160 Jones Avenue, adjacent to the northeastern corner of the campus. The location was approximately 30 feet from the residence and approximately 600 feet east of the existing track and field on the project site. A 15-minute noise measurement began at 5:04 pm. The noise environment is characterized by activity from the sports practices on the baseball field and track and field in addition to vehicles passing by on the adjacent residential streets including Jones Avenue and Cass Street. Noise levels generally ranged from 48 dBA to 66 dBA.
- Short-Term Location 2 (ST-2) was at the cul-de-sac of Arrowwood Drive directly south of Collett Park and adjacent to the residence at 10906 Arrowwood Drive. A 15-minute noise measurement began at 5:28 pm. The noise environment is characterized primarily by traffic noise on La Sierra Avenue and Collett Avenue as well as children playing in Collett Park. Noise levels generally ranged from 47 dBA to 64 dBA.
- Short-Term Location 3 (ST-3) was at the southwest corner of campus along La Sierra Avenue, adjacent to the residence at 10999 Cochran Avenue. A 15-minute noise measurement began at 5:48 pm. The noise environment is characterized primarily by heavy traffic on La Sierra Avenue and vehicles accelerating from the intersection of La Sierra Avenue and Cochran Avenue. Noise levels generally ranged from 50 dBA to 80 dBA.
- Short-Term Location 4 (ST-4) was approximately 300 feet west of the intersection of Cochran Avenue and Carrick Street, adjacent to the residence at 10911 Cochran Avenue. A 15-minute noise measurement began at 4:44 pm. The noise environment is characterized primarily by residential traffic on Cochran Avenue; residential activity, including pedestrians, dogs barking, and cars at residences starting; and sports practice at the campus fields. Noise levels generally ranged from 46 dBA to 75 dBA.

Monitoring		15-minute Noise Level, dBA						
Location	Description	L _{eq}	L _{max}	L _{min}	L50	L25	L8	L2
ST-1	At the end of Cass Street behind campus fields 3/20/24, 5:04 PM	52.1	66.0	47.8	51.3	52.4	53.5	56.1
ST-2	At the end of Arrowwood Drive, next to Collett Park 3/20/24, 5:28 PM	52.8	64.4	46.7	50.9	52.9	56.6	59.2
ST-3	At the southeast corner of campus along La Sierra Avenue, adjacent to 10999 Cochran Avenue 3/20/24, 5:48 PM	68.5	79.9	49.9	65.6	70.2	72.7	74.4
ST-4	At the intersection of Cochran Avenue and Carrick Street, near 10911 Cochran Avenue 3/20/24, 4:44 PM	57.5	75.4	45.6	51.2	55.6	60.5	65.6
Source: Appendix	Source: Appendix 5.6-1							

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Table 5.0-5	Short-renni noise measurennenns Sunninar	/ III A-weighten Souhn Levels



Figure 5.6-1 - Approximate Short-Term Noise Monitoring Locations

PlaceWorks

5.6.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

- N-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- N-2 Generation of excessive groundborne vibration or groundborne noise levels.
- N-3 For a project located within the vicinity of a private airstrip or 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, if the project would expose people residing or working in the project area to excessive noise levels.

5.6.2.1 CONSTRUCTION NOISE

The City Municipal Code does not contain established noise limits for temporary construction activities. The FTA recommends a noise level limit of 80 dBA L_{eq} for residential receptors. The FTA noise threshold is used in this analysis to assess construction noise impacts that occur in the daytime hours when people are less sensitive to noise.

5.6.2.2 TRANSPORTATION NOISE

A project will normally have a significant effect on the environment related to noise if transportation noise would substantially increase the ambient noise levels for adjoining noise sensitive areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 dBA to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, the following thresholds of significance similar to those recommended by the Federal Aviation Administration (FAA) are used to assess traffic noise impacts at sensitive receptor locations. A significant impact would occur if project traffic noise increases would exceed:

- 1.5 dBA in ambient noise environments of 65 dBA CNEL and higher
- 3 dBA in ambient noise environments of 60 to 64 dBA CNEL
- 5 dBA in ambient noise environments of less than 60 dBA CNEL

A significant cumulative traffic noise impact occurs when the thresholds above are exceeded under cumulative conditions (with project) and the contribution of the project to future traffic is calculated to be greater than 1.5 dBA to 5 dBA CNEL, based on ambient noise levels.

5.6.2.3 STATIONARY NOISE

The City's exterior noise standards are established in Section 7.25.010, Exterior Sound Level Limits, summarized in Table 5.6-3, *Exterior Noise Standards*. In addition, air-conditioning units shall be 55 dBA or less

at receiving residential property lines for units installed after January 1, 1980, per Section 7.25.010, of the City's Municipal Code.

5.6.2.4 VIBRATION

The City of Riverside does not have an established vibration limit. Therefore, the FTA criteria for architectural damage to buildings is used. For engineered concrete and masonry (i.e., commercial/retail buildings), the FTA criterion is a maximum exposure of 0.3 in/sec PPV, for buildings with nonengineered timber and masonry (i.e., residential buildings), the FTA criterion is a maximum exposure of 0.2 in/sec PPV, and for historical structures the FTA criterion is a maximum exposure of 0.12 in/sec PPV.

5.6.3 Environmental Impacts

5.6.3.1 METHODOLOGY

This section analyzes impacts related to short-term construction noise and vibration, as well as operational noise and vibration associated with operational buildout of the proposed project.

Construction Noise

Construction noise includes two main sources: construction-related traffic (worker, vendor, and haul truck trips) and construction equipment (associated with actual construction activities on-site). Construction noise modeling is conducted using the FHWA Roadway Construction Noise Model (RCNM) with construction equipment mix based on CalEEMod defaults (FHWA 2006). Project vibration impacts are addressed using reference vibration levels for construction equipment published by FTA (FTA 2018).

Operational Noise

Assessment of operational noise resulting from full buildout of the project site considers two main noise components: noise associated with increased traffic to the project site, and noise associated with the operation of the of track and field events. Traffic noise increases along study roadway segments were estimated using the average daily segment volumes provided by Garland Associates (see Appendix 5.7-1). Existing With Project traffic volumes are compared to Existing No Project to estimate the proposed project's traffic noise increase and similarly, Future With Project is compared to Future No Project to estimate cumulative traffic noise increases is compared to future buildout and cumulative data to generate the traffic noise increase. Track and field event noise were estimated based on previous noise analyses conducted for a similar use.

5.6.3.2 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.6-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project, but would not exceed applicable noise standards. [Threshold N-1]

Two types of short-term noise could occur: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul, and (2) stationary-source noise from construction equipment. Based on District-provided information, construction is anticipated to start in June 2025 and last approximately 12 months. Equipment may include, but is not limited to, items such as graders, excavators, tractors, loaders, backhoes, forklifts, air compressors, dozers, and trucks.

Construction Vehicles

The transport of workers and materials to and from the construction site would incrementally increase noise levels along roadways in the campus area. Individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA L_{max} at 50 feet from worker and vendor vehicles and haul trucks. Most of the haul trips would occur during asphalt demolition debris hauling. However, these occurrences would generally be infrequent and short lived.

Construction vehicles would primarily access the project site via La Sierra Avenue. Existing average daily traffic (ADT) along the access roads ranging between 9,200 to 18,200 ADT (Garland 2024).² Based on CalEEMod construction modeling, the estimated worker and vendor trips would be 50 daily trips during building construction, field installation, and track surfacing.³ The additional temporary construction trips would result in a temporary, incremental traffic noise level increase of 0.5 dBA CNEL along La Sierra Avenue. The existing traffic noise levels along La Sierra Avenue range from 62 dBA to 70 dBA CNEL, and therefore the worker and vendor trips would not result in a significant temporary increase that would exceed the 1.5 dBA threshold. Therefore, noise impacts from worker and vendor trips would be less than significant.

Construction Equipment

Noise generated by on-site construction equipment is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each stage of construction involves different kinds of equipment and has distinct noise characteristics. Noise levels from construction activities are typically dominated by the loudest equipment. The dominant equipment noise source is typically the engine, although work-piece noise (such as dropping of materials) can also be noticeable.

The noise produced at each construction stage is determined by combining the L_{eq} contributions from each piece of equipment used at a given time, while accounting for the ongoing time-variations of noise emissions. Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on the specific activity performed at any given moment. Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and

² Existing ADT was derived using PM peak-hour intersection traffic turn summary from the TIA (Garland 2024).

³ CalEEmod air quality modeling outputs are in Appendix 5.2-1.

diminishes at a rate of at least 6 dBA per doubling of distance (conservatively disregarding other attenuation effects from air absorption, ground effects, and shielding effects), the average noise levels at noise-sensitive receptors could vary considerably, because mobile construction equipment would move around the site with different loads and power requirements.

Average noise levels from project-related construction activities are calculated by modeling the three loudest pieces of equipment per activity phase. Equipment for each construction phase with the exception of building construction and architectural coating is modeled at spatially averaged distances (i.e., from the acoustical center of the general construction site to the property line of the nearest receptors) because the area around the center of construction activities best represents the potential average construction-related noise levels at the various sensitive receptors for mobile equipment. Equipment for building construction and architectural coating is modeled from the edge of the proposed building to the nearest sensitive receptors.

Using information provided by the District, the proposed project's expected construction equipment mix was categorized by construction activity using the FHWA RCNM. The associated, aggregate sound levels, grouped by construction activity, are summarized in Table 5.6-6, *Project-Related Construction Noise Levels*. Since the RCNM calculations do not account for shielding due to existing property line walls, intervening buildings and structures, ground effects, or air absorption, the results of these calculations are conservative (that is, they represent a "worst-case" scenario). As shown in Table 5.6-6, construction-related noise levels are estimated to reach up to 80 dBA and would not exceed the 80 dBA L_{eq} threshold at the nearest sensitive receptors. Therefore, project construction noise impacts would be less than significant.

	Noise Levels in dBA Leg				
Construction Activity Phase	RCNM Reference Noise Level	Residential Receptors to North	Collett Elementary School Receptor to North	Residential Receptors to East	Residential Receptor to South
Distance in feet	50	300	435	870	860
Demolition	85	69	66	60	60
Site Prep	82	66	63	57	57
Grading	85	69	66	60	60
Track Surfacing	81	65	62	56	56
Field Installation	82	66	63	57	57
Finish/Landscaping	83	67	64	58	58
Distance in feet	50	70	640	1,200	950
Building Construction	83	80	61	55	57
Architectural Coating	74	71	52	46	48
Maximum dBA L _{eq}		80	66	60	60
Exceeds FTA's 80 dBA Leq Threshold?		No	No	No	No
Source: FHWA's RCNM software. Distance measurements were taken using Google Earth (2020) from the acoustical center of the project site. dBA Leg = Energy-Average (Leg) Sound Levels.					

 Table 5.6-6
 Project-Related Construction Noise Levels

On-Campus Receptors

Students would remain on site during demolition and building construction. Construction activities could occur within 50 feet of existing classroom buildings. As shown in Table 5.6-6, construction noise levels would range between 74 and 85 dBA L_{eq} at 50 feet per the RCNM Reference Noise Level. Typical exterior-to-interior noise attenuation is 25 dBA with windows and doors closed. This would result in interior noise levels of approximately 49 to 60 dBA L_{eq} . Speech interference is considered intolerable when background noise levels exceed 60 dBA. However, average construction noise levels are not expected to exceed 60 dBA L_{eq} within adjacent classrooms based on typical exterior-to-interior noise attenuation. In addition, to avoid classroom disruption, some work would be done during instructional breaks when students are off campus. Additionally, construction would occur throughout the project site and thereby would be further than 50 feet at times, which would reduce interior noise levels. Therefore, on-campus construction noise impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant impact

Impact 5.6-2 Long-term operation of the proposed project would result in a significant increase in noise. [Threshold N-1]

Project Track and Field Noise Analysis

The proposed project would entail the renovation of the existing track and field with the addition of field lighting, public address (PA) system, scoreboard, field house, and bleachers to accommodate the La Sierra sports activities. The track and field noise analysis assumes full capacity of the stadium (2,800 spectators), which is a worst-case scenario expected to occur a few times per year between 6:30 pm and 10:30 pm during varsity football games.

General Track and Field Bleacher Noise

Operations of the renovated track and field would generate a new noise source associated with crowds and amplified sound and speech from the proposed PA system. Noise is highly variable during a stadium event and depends on the type and level of activity in the bleachers and on the field, for example:

- PA systems create higher sound levels than does typical crowd reactions. PA noise (commentary, announcements, etc.) occurs far more often than crowd cheers.
- Cheering is highly variable, depending on the particular moment-to-moment activity (a 'good' play versus a score), on whether the home team or visitor scores, and on the number of the home or visitor attendees.
- Cheerleaders on portable PA systems and special half-time shows (e.g., the use of fireworks or other special effects) can generate above-average noise levels.
- Foot-stomping on aluminum bleachers can generate substantial noise.
- Other noise sources during a stadium event include referee whistles, horns, and bells.

Track and Field Operations

Operations of the stadium would generate noise associated with crowds and amplified sound and speech from the proposed PA system. Recent studies at other high schools conducted by PlaceWorks included football stadiums with bleacher and PA noise modeled using SoundPLAN, a three-dimensional noise modeling software program, that are considered similar to this proposed project. These two example projects were used to establish a conservative bleacher and crowd noise level for the proposed project.

William Workman High School Football Stadium Noise Technical Study, Hacienda La Puente Unified School District (PlaceWorks, April 2019): Sports field noise modeling was conducted for residential locations closest to the mostly flat project site, which are similar conditions to the proposed project. The modeling assumed full capacity of the bleachers accommodating up to 1,000 spectators (700 home and 300 visitors). The field modeled speakers as individual point sources, 45 feet above finished grade angled in the proposed direction, mounted on four poles with a total of six speakers, two poles located on the north and two on the south of the football field. On the home side, the modeling assumed two speakers mounted on each pole with one directed toward the top of the bleachers and one speaker directed toward the bottom of the bleachers and field. Visitor side speakers were modeled as directed toward the bleachers. Both bleachers were modeled as area sources. SoundPLAN modeling indicated that future operational noise levels from a varsity football game in full attendance are predicted to range from 55 dBA to 75 dBA L_{eq} at adjacent residential uses. While multiple factors such as crowd size, type of game, type of amplified or live marching band, and shielding (such as intervening buildings) may affect overall noise levels from event to event at each residential receptor, a conservative noise level of 75 dBA L_{eq} is applied at adjacent residential property lines.

Costa Mesa High School Athletic Facilities IS/MND, Newport-Mesa Unified School District (PlaceWorks, December 2016). Noise levels observed during a football game with approximately 3,000 attendees ranged from roughly 57 to 58 dBA L_{eq} and from 68 to 71 dBA L_{max} (all at 350 feet from the side of the field). Adjusting for distance, crowd and speaker noise resulted in sound levels between 74 and 75 dBA L_{eq} at 50 feet.

Reference Noise Level: Based on the two aforementioned noise studies, the conservative assumed reference noise level applied to the proposed project is 75 dBA L_{eq} at 50 feet from the track and field boundary. This noise level is applied to this analysis as a conservative, worst case scenario for crowd and speaker noise combined.

Based on the projected crowd and speaker noise levels and the measured ambient noise levels, projected noise levels at the residences to the north would be up to 75 dBA L_{eq} , 50 dBA L_{eq} at residential uses to the west across La Sierra Avenue, 52 dBA L_{eq} at residential uses to the east, and 49 dBA at residential uses to the south, not accounting for additional shielding due to existing on-site buildings. Residential uses to the north of the proposed track and field renovations would experience a substantial temporary (20 dBA+) increase in ambient noise level during capacity-level events.

The existing wall along the northern property line of the project site would reduce noise from the crowd and field activities by approximately 5 dBA at a first floor (ground-level) elevation. This would be a noticeable reduction in crowd and field noise, but noise levels would still exceed the City's 55 dBA L_{eq} standard at some

locations. Rooms on the second story of two-story homes would not benefit from the eight-foot wall. The wall along the northern property boundary would decrease the severity of the noise increase; however, it would not reduce the impact to a less than significant level. The District is exempt from complying with the City's Municipal Code; however, because the proposed project would result in a temporary, periodic significant increase in track and field noise, this impact would be considered significant.

Operation of track and field events would exceed the daytime 55 dBA L_{eq} noise standard and could exceed the nighttime 45 dBA L_{eq} noise standard if events go past 10:00 pm and generate a substantial temporary increase in ambient noise levels at adjacent residential uses. The District is exempt from complying with the City's Municipal Code; however, because the proposed project could result in a temporary, periodic significant increase in stationary noise, this impact would be considered significant.

Parking Lot and Tennis Courts Noise

Noise associated with parking lot movements would decrease with implementation of the proposed project due to the reduction of 63 parking spaces. Noise from tennis courts activity would remain the same as existing noise on the site with implementation of the proposed project. The tennis courts would be relocated, but not substantially. Therefore, parking lot and tennis courts noise impacts would be less than significant.

Mechanical Equipment

Though Section 7.25.010, Exterior sound level limits, of the Riverside Municipal Code exempts air condition and noise from similar equipment, this is only exempt when associated with residential uses. Therefore, noise from potential heating, ventilation, and air conditioning (HVAC) equipment associated with the new field house is analyzed. Typical HVAC equipment generates noise levels ranging up to 72 dBA at a distance of 3 feet. To be conservative it is assumed that HVAC equipment would be installed at the nearest edge of the proposed field house to sensitive receptors. The nearest residential property line to the proposed field house is approximately 50 feet to the north along the northern project boundary. At this distance, noise levels would attenuate to 48 dBA. HVAC noise levels would potentially exceed the City's nighttime noise standards of 45 dBA for stationary noise sources. Therefore, impacts would be potentially significant.

Traffic Noise

Future development and activities under the proposed project are expected to affect the community noise environment mainly by generating traffic on project area roadways due to home games. Implementation of the proposed project would not generate new vehicle trips, but rather trips would be diverted from currently used off-site football fields to the project area roadways. Transportation-source noise levels were calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with traffic counts provided by Garland Associates (Garland 2024). Modeled traffic volumes were derived from traffic turning movements at study intersections within the traffic report. The traffic noise model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. Table 5.6-7, *Project-Related Increases in Traffic Noise*, summarizes
project-related traffic-noise increases by study roadway segment. Cumulative traffic noise impacts are discussed in Section 5.6.4, Cumulative Impacts.

Table 5.0-7 Project-Related increases in frame noise											
	Ave	Average Daily Traffic Volumes				Traffic Noise Increase					
Roadway Segments	Existing No Project	Existing With Project	Future No Project	Future With Project	Existing No Project	Existing with Proposed Project	Existing Change	Operating Year 2026 With No Project	Operating Year 2026 With Proposed Project	2026 Change	Exceed Applicable Standard
La Sierra Avenue							9				
North of Collett Avenue	9,200	10,600	13,130	13,530	67.2	68.7	1.5	67.8	68.9	1.1	No
Collett Avenue to Spaulding Road	12,500	12,990	17,950	18,440	62.5	64.0	1.6	62.6	64.2	1.5	No
Spaulding Road to Cochran Avenue	12,500	12,990	15,360	15,850	62.5	63.4	0.9	62.6	63.5	0.9	No
Cochran Avenue to Magnolia Avenue	13,100	13,620	13,940	14,460	68.7	69.0	0.3	68.9	69.1	0.3	No
South of Magnolia Avenue	18,200	18,920	18,200	18,920	70.1	70.1	<0.1	70.3	70.3	<0.1	No
Collett Avenue						=	-	-	-	=	=
La Sierra Avenue to Jones Avenue	8,300	8,630	9,980	10,310	65.5	66.3	0.8	65.6	66.4	0.8	No
East of Jones Avenue	8,700	9,040	10,380	10,720	65.7	66.4	0.8	65.8	66.6	0.7	No
Cochran Avenue											
La Sierra Avenue to Jones Avenue	1,600	1,650	3,190	3,240	53.4	56.4	3.0	53.5	56.5	2.9	No
East of Jones Avenue	1,600	1,650	2,850	2,900	53.4	55.9	2.5	53.5	56.0	2.4	No
Source: Traffic data provided by Garland Associates 2024. See Appendix 5.7-1.											

Table 5.6-7	Project	-Related	Increases	in	Traffic	Noise
	1101000	nonatoa	110100303		manno	110130

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Notes: Bold = Significant Traffic Noise Increase

As shown in Table 5.6-7, project-related traffic noise increases would not exceed the standard of 1.5 dBA for ambient noise environments of 65 dBA CNEL, 3 dBA for ambient noise environments of 60 to 64 CNEL, and 5 dBA for ambient noise environments of less than 60 dBA CNEL. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Potentially significant.

Impact 5.6-3: The proposed project would not result in significant short-term groundborne vibration and groundborne noise. [Threshold N-2]

Temporary Construction Vibration

Construction can generate varying degrees of ground vibration, depending on the construction procedures and equipment. The use of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures. Table 5.6-8, *Vibration Levels for Typical Construction Equipment and Screening Distances*, summarizes vibration levels for typical construction equipment at a reference distance of 25 feet and the vibration impact screening distances (minimum distance needed for no potential vibration impact to occur) for different FTA building categories.

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Equipment	FTA Reference Vibration Levels in PPV (in/sec) at 25 feet	Commercial Structures Screening Distance to 0.3 PPV in/sec	Residential Structures Screening Distance to 0.2 PPV in/sec	Historical Structures Screening Distance to 0.12 PPV in/sec
Vibratory Roller	0.21 in/sec	20 feet	26 feet	37 feet
Large Bulldozer	0.089 in/sec	12 feet	15 feet	21 feet
Loaded Trucks	0.076 in/sec	11 feet	14 feet	19 feet
Jackhammer	0.035 in/sec	6 feet	8 feet	>11 feet
Small Bulldozer	0.003 in/sec	2 feet	2 feet	>3 feet
Source: FTA 2018.	-	-	-	-

 Table 5.6-8
 Vibration Levels for Typical Construction Equipment and Screening Distances

Vibration Damage

Off-Site Structures

Damage from vibrational energy is typically a one-time event and is most likely to occur when the source and receptor are very close. The threshold for architectural damage is 0.2 in/sec PPV for nonengineered timber and masonry buildings (applicable to the surrounding residential structures) and 0.3 in/sec PPV for engineered concrete and masonry (applicable to Collett Elementary School). Table 5.6-9, *Typical Construction Equipment Vibration Levels*, summarizes vibration levels for typical construction equipment at the nearest sensitive receptors.

Table 5.6-9	Typical Constru	Typical Construction Equipment Vibration Levels						
	FTA Reference PPV (in/sec) at 25 Feet	Residences to Northwest PPV	Collett Elementary School to North PPV	Residences to the South PPV (in/sec) at	Residences to the East PPV (in/sec) at			
Equipment		(in/sec) at 50 Feet	(in/sec) at 250 Feet	500 Feet	550 Feet			
Vibratory Roller	0.21	0.074	0.007	0.002	0.002			
Large Bulldozer	0.089	0.031	0.003	0.001	0.001			
Loaded Trucks	0.076	0.027	0.002	0.001	0.001			
Jackhammer	0.035	0.012	0.001	<0.001	<0.001			
Small Bulldozer	0.003	0.001	0.000	<0.001	<0.001			
Source: FTA 2018.								

At 25 feet, typical construction equipment produces vibration levels of up to 0.07 in/sec PPV; at a distance greater than 30 feet, even vibratory roller vibration levels would attenuate to less than the 0.2 in/sec PPV. The nearest off-campus structures to construction activities are residences approximately 50 feet to the north and approximately 250 feet north (Collett Elementary School) from the project site boundary to the respective residential property lines. At that distance, vibration levels would attenuate to approximately 0.07 in/sec PPV or less. This is below the 0.2 in/sec PPV and the 0.3 in/sec PPV thresholds. Therefore, vibration impacts to off-site receptors would be less than significant.

Operational Vibration

Typically, land uses that result in vibration impacts are industrial businesses that use heavy machinery or operation of large trucks over uneven surfaces. The operation of the proposed project would not include any substantial long-term vibration sources. No vibration impacts from operation sources would occur.

Level of Significance Before Mitigation: Less than significant impact

Impact 5.6-4: The project site is not within the vicinity of a private airstrip or 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. [Threshold N-3]

The closest airport to the school is Riverside Airport, approximately 2.8 miles to the northwest (AirNav 2022). At that distance, the proposed project would not expose people residing or working in the project area to excessive noise levels, and no impact would occur.

Level of Significance Before Mitigation: No impact.

5.6.4 Cumulative Impacts

Noise and vibration are localized occurrences; they decrease rapidly in magnitude as the distance from the source to the receptor increases. Therefore, only those related projects that are in the direct vicinity of the project site would have the potential to be considered in a cumulative context with the project's contribution.

No major stationary sources of noise, construction noise, or groundborne vibration sources have been identified in the project area.

Construction

Cumulative impacts would only occur if other projects are being constructed in the vicinity of the project site at the same time as the proposed project. The general area around the project site is built out. Project construction noise would not combine with other planned and approved construction projects to create cumulatively considerable impacts. Therefore, cumulative construction noise and vibration impacts would be less than significant.

Because mass grading of the site would be completed before the construction of the stadium, cumulative construction noise would be less than significant.

Operation

Operation of the proposed project would exceed the City's noise standards at residential uses located along the northern project boundary. Noise sources associated with proposed HVAC equipment for the field house would be reduced at the source (by means of appropriately locating the HVAC equipment) and would not result in a cumulative noise impact. Noise associated with track and field events would be reduced to the extent feasible with implementation Mitigation Measures N-1 through N-5, however, a significant increase over ambient noise level would occur during track and field event. Therefore, impacts would be cumulatively significant.

There are no other nearby sources of stationary noise in the project area that would significantly contribute to the ambient noise environment during games and events near the project site. However, the addition of new HVAC systems 50 feet from the residences north of the project site would require mitigation to be less than the City noise threshold for residential areas (see Mitigation Measure N-6).

A significant cumulative traffic noise increase would be identified if project traffic were calculated to contribute 1 dBA or more under Cumulative Plus Project conditions to a significant traffic noise increase over existing conditions. That is, if a cumulative traffic noise increase greater than 1.5 dBA, 3 dBA, or 5 dBA relative to the existing environment significance threshold (less than 60 CNEL dBA, 60 to 65 CNEL dBA, greater than 65 CNEL dBA, respectively) is calculated, and the relative contribution from project traffic is calculated to contribute 1 dBA or more to this cumulative impact, it would be considered cumulatively considerable. As shown in Table 5.6-7, the cumulative increase would be less than the most stringent significance threshold of 1.5 dBA for ambient noise environments of 65 dBA CNEL, 3 dBA for ambient noise environments of 60 to 64 CNEL, and 5 dBA for ambient noise environments of less than 60 dBA CNEL. Therefore, cumulative traffic noise impacts would be less than significant.

5.6.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.6-1, 5.6-3, and 5.6-4.

Without mitigation, the following impacts would be **potentially significant**:

• Impact 5.6-2: Project implementation would generate a substantial increase in noise near existing residences during operational activities.

5.6.6 Mitigation Measures

Impact 5.6-2

- N-1 The Alvord Unified School District shall program the PA system to restrict any activities to no later than 10:30 pm, with the exception of special events that occur periodically throughout the year (e.g., homecoming, graduation).
- N-2 Three months prior to holding the first spectator event, the Alvord Unified School District shall have hired a construction manager to prepare a cost estimate per impacted home along Arrowwood Drive to fund installation of upgraded windows to provide additional noise attenuation. The impacted homes have initially been determined to be the residences extending from 10900 to 11012 Arrowwood Drive; however, all applicable residences shall be determined once plans have been finalized. Additional acoustic investigations shall be conducted to define the windows of habitable rooms that exceed an interior noise level of 45 dBA and shall require installation of upgraded windows (e.g., existing double-paned windows would not warrant replacement). Working with qualified contractor(s), the District shall complete cost estimates for each house, and deposit such funds in an escrow account. Homeowners will be responsible for contracting with qualified contractors and funds not exceeding the mitigation payment shall be released by the escrow company upon receipt of a signed improvement contract. The District shall pay an amount of up to \$4,000 per impacted house at the time project improvements are proposed.
- N-3 Prior to operational activities, the District shall develop and enforce a good-neighbor policy for sports field events. Signs shall be erected at entry points that State-prohibited activities during an event (e.g., use of air horns, unapproved audio amplification systems, bleacher foot-stomping, loud activity in parking lots upon exiting the field), and events shall be monitored by the District staff to ensure the good-neighbor policy is implemented.
- N-4 During subsequent design phases of the bleachers and PA system, the District's sound system contractor shall create a Stadium Sound System Design Plan. The project's sound system design goal shall aim at incorporating as many directional low-power speakers as practical that are located as close to the event attendees as practical while ensuring that the speakers are not projecting to the residences towards the north. The design shall include design specifications that optimize the stadium sound system for speaker placement, speaker dispersion pattern, and speaker acoustic output as well as minimized spill-over sound levels into the adjacent residential areas.

- N-5 During the final design stage, the proposed bleachers shall incorporate solid backing and vertical panels to enclose foot wells to provide track and field noise shielding to adjacent residential uses.
- N-6 During a second, future design phase, locate HVAC units on the southern side of the proposed field house, at least 75 feet from the residential property line to the north of the project site.

5.6.7 Level of Significance After Mitigation

Impact 5.6-2

Implementation of Mitigation Measure N-1 would restrict the use of the PA system to no later than 10:30 pm, with the exception of special events, and Mitigation Measure N-2 would provide funding for upgraded windows to homeowners of residences that are impacted by the noise increases.

Implementation of Mitigation Measures N-3 through N-5 would result in reductions in track and field event noise at adjacent residential uses; however, even with a state-of-the-art equipment and design, it is possible that the daytime 55 dBA L_{eq} and the nighttime 45 dBA L_{eq} noise standards at the adjacent residences would not be achievable. Furthermore, at locations where the PA noise can be reasonably limited to 55 dBA L_{eq} , noise from the crowd would still exceed 55 dBA L_{eq} . Therefore, the resulting noise levels would exceed the adopted thresholds and the proposed project's impact related to an increase in ambient noise levels at adjacent residential sensitive receptors during field activities would remain *significant and unavoidable*.

Implementation of Mitigation Measure N-6 would minimize potential HVAC noise impacts through site design, by locating the HVAC unit at least 75 feet from the project boundary and siting the unit on the south side of the proposed field house to benefit from structural shielding. Therefore, HVAC noise impacts would be reduced to a level of less than significant.

5.6.8 References

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5. Environmental Analysis

5.7 TRANSPORTATION

This section of the draft environmental impact report (DEIR) evaluates the potential for implementation of the La Sierra Track and Field Project to result in transportation and traffic impacts at the campus and the surrounding community. The analysis in this section is based in part on the following technical report(s):

Traffic Impact Analysis for the Proposed La Sierra High School Track and Field Project - Riverside, Garland Associates, March 2024

A complete copy of this study is included as Appendix 5.7-1 to this DEIR.

This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators; constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1, which would include renovating the track and field; and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

5.7.1 Environmental Setting

5.7.1.1 REGULATORY BACKGROUND

State Regulations

Senate Bill 743

On September 27, 2013, SB 743 was signed into law. The legislature found that with the adoption of SB 375, the state had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas (GHG) emissions, as required by AB 32. Additionally, Assembly Bill 1358, the California Complete Streets Act, requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users.

SB 743 started a process that fundamentally changes transportation impact analysis as part of California Environmental Quality Act (CEQA) compliance. These changes include the elimination of auto delay, level of service (LOS), and similar measures of vehicular capacity or traffic congestion as the basis for determining significant impacts. As part of the new CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (California Public Resources Code section 21099[b][1]). On January 20, 2016, the Governor's Office of Land Use and Climate Innovation (LCI) released proposed revisions to its CEQA Guidelines for the implementation of SB 743. LCI developed alternative metrics and thresholds based on VMT. The guidelines were certified by the Secretary of the Natural Resources Agency in December 2018. As of July 1, 2020, lead

agencies were required to consider VMT as the metric for determining transportation impacts. The guidance provided relative to VMT significance criteria is focused primarily on land use projects, such as residential, office, and retail uses. However, as noted in the updated CEQA Guidelines, agencies are directed to choose metrics that are appropriate for their jurisdiction to evaluate the potential impacts of a project in terms of VMT.

Regional Regulations

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is the federally recognized metropolitan planning organization for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs.

2020-2045 Regional Transportation Plan/Sustainable Community Strategy (Connect SoCal)

In April 4, 2024, SCAG adopted the 2024-2050 RTP/SCS, Connect SoCal, and addresses four main challenges that include regional mobility, housing and access to services in local communities, the region's environment, and the regional economy. Connect SoCal is a long-range regional plan developed with broad input that outlines the challenges, goals, policies, transportation investments, and land use strategies for the Southern California region through 2050. SCAG coordinates regional planning efforts, but implementation relies on many other agencies that construct projects and regulate land use. The plan analyzes costs, outlines a development pattern to accommodate housing needs, includes strategies to meet emissions goals, and aims to advance broader regional objectives like equity, resilience, goods movement, and resource efficiency (SCAG 2024).

Riverside County Transportation Commission

The Riverside County Transportation Commission (RCTC) plans and implements transportation and transit improvements and assists local governments with funding for local streets and roads.

Riverside County Congestion Management Program

In the State of California, the Congestion Management Program (CMP) was first established in 1990 under Proposition 111. Proposition 111 established a process for each metropolitan county in California to designate a Congestion Management Agency (CMA) that would be responsible for development and implementation of the CMP within county boundaries. The Riverside County Transportation Commission (RCTC) was designated as the CMA for Riverside County in 1990, and therefore, prepares CMP updates in consultation with the Technical Advisory Committee (TAC), which consists of local agencies, the County of Riverside, transit agencies, and subregional agencies (RCTC 2019).

The intent of the CMP is to more directly link land use, transportation, and air quality, thereby promoting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. Counties within California have developed CMP's with varying methods and strategies to meet the intent of the CMP legislation.

The focus of the CMP is the development of an "enhanced traffic monitoring system," in which real-time traffic count data can be accessed by RCTC to evaluate the condition of the Congestion Management System (CMS), as well as meet other monitoring requirements at the state and federal levels. Per the adopted LOS standard of E, when a CMS segment falls to "F," a deficiency plan is required. Preparation of a deficiency plan is the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency will also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including transportation demand management (TDM) strategies, transit alternatives, and a schedule for mitigating the deficiency. To ensure that the CMS is appropriately monitored to reduce CMP deficiencies, it is the responsibility of local agencies, when reviewing and approving development proposals, to consider the traffic impacts on the CMS.

Additionally, under the Riverside County CMP, LOS A through E represent acceptable conditions, and LOS F represents unacceptable conditions. The CMP indicates that a project may have a significant impact and that a traffic study would be required if the project would adversely affect the morning or afternoon peak periods on a designated CMP arterial roadway or freeway.

County of Riverside Transportation Uniform Mitigation Fee

The County of Riverside's transportation uniform mitigation fee is administered by the Western Riverside Council of Governments. Under this fee, the council collects fees from new development to fund transportation improvements, such as roadway widening, new roadways, intersection improvements, traffic signalization, etc., for the purpose of mitigating future growth through 2035. Public schools are exempt from this fee.

Local Regulations

City of Riverside General Plan

The Circulation and Community Mobility Element of the City of Riverside General Plan includes the following policies related to transportation:

- **Policy CCM-2.3.** Maintain LOS D or better on Arterial Streets wherever possible. At key locations, such as City Arterials that are used by regional freeway bypass traffic and at heavily traveled freeway interchanges, allow LOS E at peak hours as the acceptable standard on a case-by-case basis.
- Policy CCM-6.1. Encourage the reduction of vehicle miles, reduce the total number of daily peak-hour vehicular trips, increase the vehicle occupancy rate and provide better utilization of the circulation system through the development and implementation of TDM programs contained in the SCAQMD and County of Riverside TDM Guidelines.

- **Policy CCM-8.1.** Continue to regularly meet with local school districts to identify safe routes to all schools, enabling better school access by cyclists and pedestrians. Support the establishment of safe drop-off and pick-up zones around schools during the morning and afternoon peak hours.
- Policy CCM-8.2. Promote walking and biking as a safe mode of travel for children attending local schools.
- Policy CCM-8.3. Apply creative traffic management approaches to address congestion in areas with unique problems, particularly on roadways and intersections in the vicinity of schools in the morning and afternoon peak hours and near churches, parks, and community centers.
- **Policy CCM-8.4.** Give priority to sidewalk and curb construction to areas near schools with pedestrian traffic.
- Policy CCM-8.5. Continue to participate in the Riverside County Transportation Commission's SB 821
 program for the funding of facilities for the exclusive use of pedestrians and bicyclists to eliminate
 missing sidewalk and/or bicycle path links.
- Policy CCM-8.6. Continue to administer the Pedestrian and Bicycle School Safety Program through the Police Department to provide education for school aged children to help them identify traffic hazards and to develop safe pedestrian and biking habits.

City of Riverside Municipal Code

Chapter 19.580, Parking and Loading, of the Riverside Municipal Code, establishes regulations to regulate off-street parking and loading to minimize traffic congestion and hazards; allow flexibility in addressing parking, loading, and access issues; provide for off-street parking in proportion to the needs of generated by different land uses; and ensure that parking areas are designed and operate in a compatible manner with surrounding land uses without adversely affecting other nearby land uses and neighborhoods. According to Section 19.580.060, Parking Requirements, stadiums are required to provide 1 parking space per 4 fixed seats.

City of Riverside Traffic Impact Analysis Guidelines

The City's Traffic Impact Analysis (TIA) Guidelines for Vehicle Miles Traveled and Level of Service Assessment (TIA Guidelines) prescribes methods for traffic studies in the City. The City's TIA Guidelines state that a project can be screened from requiring a CEQA VMT analysis if the project is a local-serving type of land use. As the guidelines specifically state that a local-serving K-12 school falls into this category, the proposed project can be screened from any further VMT analysis.

5.7.1.2 EXISTING CONDITIONS

Existing Street Network

The TIA evaluated six intersections in the vicinity of the campus, as shown in Table 5.7-1, *Study Area Intersections*. The streets that provide access to the campus include La Sierra Avenue, Collett Avenue, Spaulding Road, Cochran Avenue, Magnolia Avenue, and Jones Avenue.

	Intersections	Traffic Control
1.	La Sierra Avenue/Collett Avenue	Traffic Signal
2.	La Sierra Avenue/Spaulding Road/School Driveway	Traffic Signal
3.	La Sierra Avenue/Cochran Avenue	Traffic Signal
4.	La Sierra Avenue/Magnolia Avenue	Traffic Signal
5.	Collett Avenue/Jones Avenue	Stop Sign on Jones Avenue
6.	Cochran Avenue/Jones Avenue	4-Way Stop Signs
Sou	rce: Garland 2024 (Appendix 5.7-1).	

Table 5.7-1Traffic Study Area Intersections

La Sierra Avenue

La Sierra Avenue is a four-lane north-south street with a raised median that abuts the west side of the school campus. It has bike lanes and sidewalks on both sides of the street with no on-street parking. There are three driveways on the east side of La Sierra Avenue that provide access to school parking lots. The speed limit on La Sierra Avenue is 45 miles per hour (mph), but with a reduced school speed limit of 25 mph when children are present.

Collett Avenue

Collett Avenue is a four-lane east-west street approximately 850 feet north of the school campus. West of La Sierra Avenue, it has bike lanes and sidewalks on both sides of the street with no on-street parking. East of La Sierra Avenue, it has sidewalks and on-street parking on both sides of the street except for a short one-block no parking zone immediately east of La Sierra Avenue. The speed limit on Collett Avenue is 45 mph west of La Sierra Avenue and 40 mph east of La Sierra Avenue, but with a reduced school speed limit of 25 mph when children are present.

Spaulding Road

Spaulding Road is a two-lane east-west street that intersects with La Sierra Avenue in alignment with the school's middle driveway. It has parking and sidewalks on both sides of the street and the speed limit is 25 mph.

Cochran Avenue

Cochran Avenue is a two-lane east-west street located approximately 150 feet south of the school campus. It is separated from the campus by a row of houses that front onto Cochran Avenue. It has parking and sidewalks on both sides of the street and the speed limit is 25 mph.

Magnolia Avenue

Magnolia Avenue is a six-lane east-west street with a raised median that intersects with La Sierra Avenue approximately one-third of a mile south of the school campus. It has bike lanes and sidewalks on both sides of the street with no on-street parking. The speed limit on Magnolia Avenue is 40 mph.

Jones Avenue

Jones Avenue is a two-lane north-south street approximately 125 feet east of the school campus. It is separated from the campus by a row of houses that front onto Jones Avenue. It has parking and sidewalks on both sides of the street, and the speed limit is 25 mph.

Existing Traffic Volumes

Manual traffic counts were taken at the six study area intersections during the Friday evening peak period on March 1, 2024. The peak hour for this analysis refers to the one-hour time period prior to the beginning of an event at the stadium (e.g., a football game) when patrons are traveling to the stadium. The traffic analysis addresses the pre-event time period because the ambient traffic volumes are substantially higher during the pre-event period (generally between 6:00 pm and 7:00 pm) compared to the post-event period (after 9:00 pm). Most high school football games in the District begin at 7:00 pm. The existing peak hour traffic volumes and turning movements are calculated in Table 5.7-2, *Existing Traffic Volumes: Friday Evening Peak Hour*.

Intersection	Traffic Volumes
Collett Avenue and La Sierra Avenue	2,050
La Sierra Avenue/Spaulding Road/School Driveway	1,300
La Sierra Avenue and Cochran Avenue	1,415
La Sierra Avenue and Magnolia Avenue	3,620
Collett Avenue and Jones Avenue	910
Jones Avenue and Cochran Avenue	230
Source: Garland 2024 (Appendix 5.7-1).	

 Table 5.7-2
 Existing Traffic Volumes – Friday Evening Peak Hour

Existing Intersection Levels of Service

The TIA included an evaluation of LOS at the affected study areas. While SB 743 has shifted the determination of CEQA impacts from LOS to VMT, LOS is still used by the City as outlined in the City's Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment. Therefore, an LOS evaluation has been included for informational purposes. LOS is an industry standard by which the operating conditions of a roadway segment or an intersection are measured. LOS is defined on a scale of

A through F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS A is characterized by free flowing traffic conditions with no restrictions on maneuvering or operation speeds, where traffic volumes are low and travel speeds are high. LOS F is characterized by forced flow with many stoppages and low operating speeds.

To quantify the existing baseline traffic conditions, the six study area intersections were analyzed to determine their operating conditions during the Friday evening peak hour. Based on the hourly traffic volumes, the turning movement counts, and the existing number of lanes at each intersection, the average vehicle delay values and corresponding levels of service have been determined for each intersection, as summarized in Table 5.7-3, *Existing and Future Intersection Levels of Service*.

	Delay Value (seconds/vehicle) and Level of Service Friday Evening Pre- Event Peak Hour			
Intersections	Existing Conditions	2026 Without Project		
La Sierra Avenue/Collett Avenue	16.5 – B	16.8 – B		
La Sierra Avenue/Spaulding Road/School Driveway	5.8 – A	5.8 – A		
La Sierra Avenue/Cochran Avenue	8.5 – A	8.6 – A		
La Sierra Avenue/Magnolia Avenue	24.2 – C	25.4 – C		
Collett Avenue/Jones Avenue	12.5 – B	12.8 – B		
Cochran Avenue/Jones Avenue	7.5 - A	7.5 - A		
Source: Garland 2024 (Appendix 5.7-1).				

 Table 5.7-3
 Existing and Future Intersection Levels of Service

As shown in Table 5.7-3, all six of the study area intersections currently operate at acceptable levels of service (LOS A through D) during the Friday evening peak hour. Three intersections operate at LOS A, two intersections operate at LOS B, and one intersection operates at LOS C. It should be noted that the delay and LOS values for the intersections with traffic signals and 4-way stop signs represent the average for the entire intersection, while the delay and LOS value for the intersection with a stop sign only on the side street (Collett Avenue/Jones Avenue) represent the approach to the intersection that has the stop sign.

The levels of service shown in Table 5.7-3 are based on the average vehicle delay values that were calculated for each intersection using the Highway Capacity Software. The relationship between the average delay values and levels of service is shown in Table 5.7-4, *Relationship Between Delay Values and Levels of Service*.

Table 5.7-4 Relations	ship Between Delay values and Level of S	bervice
Level of Service	Delay Value (seconds) Signalized Intersections	Delay Value (seconds) Unsignalized Intersections
A	0.0 to 10.0	0.0 to 10.0
В	> 10.0 to 20.0	> 10.0 to 15.0
С	> 20.0 to 35.0	> 15.0 to 25.0
D	> 35.0 to 55.0	> 25.0 to 35.0
E	> 55.0 to 80.0	> 35.0 to 50.0
F	> 80.0	> 50.0
Source: Garland 2024 (Appendix 5.7-1).		

 Table 5.7-4
 Relationship Between Delay Values and Level of Service

Pedestrian and Bicycle Facilities

La Sierra Avenue, Collett Avenue, Spaulding Road, Cochran Avenue, Magnolia Avenue, and Jones Avenue have sidewalks along both sides of the street. Painted crosswalks exist at each of the intersections in the study area. La Sierra Avenue, Collett Avenue, and Magnolia Avenue have bicycle lanes. The intersections at La Sierra Avenue and Collett Avenue, La Sierra Avenue and Cochran Avenue, La Sierra Avenue and Spaulding Road, and La Sierra Avenue and Magnolia Avenue have pedestrian signals and pedestrian push buttons to activate the signals. Additionally, bike racks are provided at the campus.

Public Transit

The Riverside Transit Agency (RTA) operates Route 15 adjacent to the campus on La Sierra Avenue. Bus stops for this route are located on the east side of the following intersections: La Sierra Avenue and Collett Avenue and La Sierra Avenue and Cochran Avenue. RTA also operates Route 1 on Magnolia Avenue south of the school site. Bus stops for this route are located on both sides of Magnolia Avenue at La Sierra Avenue. Additionally, the La Sierra Metrolink Station is approximately 0.75 miles south of the campus.

Parking

The existing parking lot on the project site consists of 430 parking spaces, including 11 ADA parking spaces. Additionally, the existing parking lot in the southwestern portion of the campus consists of 44 parking spaces, including 2 ADA parking spaces, and the existing southern parking lot consists of 115 parking spaces, including 5 ADA parking spaces.

5.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).
- T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- T-4 Result in inadequate emergency access.
- T-5 Result in inadequate parking capacity (this threshold was removed from the CEQA Guidelines in 2010 but is included in this DEIR because it may indirectly result in other impacts).

5.7.3 Environmental Impacts

5.7.3.1 METHODOLOGY

The methodology for the TIA included the following steps:

- 1. Establishing the existing baseline traffic conditions on the streets that provide access to the campus.
- 2. Projecting the future baseline traffic conditions for the target year of completion for the proposed project (year 2026).
- 3. Estimating the levels of traffic that would be generated by the stadium for a capacity-level event.
- 4. Conducting a comparative analysis of traffic conditions with and without the stadium.
- 5. Evaluating the parking supply and demand during a stadium event.

Additionally, the stadium analysis was based on Friday evening traffic conditions on the streets and intersections in the proposed project vicinity.

Project-Generated Traffic

The traffic volumes that would be generated by the stadium for a capacity-level event (2,800 spectators) were used to estimate the impacts of the proposed project on the study area streets and intersections. The trip generation rates and the anticipated traffic volumes that would be generated by the stadium are shown in Table 5.7-5, *Project Generated Traffic*, for a capacity-level event.

The trip generation rates shown in Table 5.7-5 reflect the assumption that the stadium would generate a demand of one vehicle for every four seats (for vehicles that remain parked at the site) and that an additional 10 percent of the vehicles arriving at the stadium would drop passengers off and then leave. The rate of one vehicle for every four seats is based on the parking requirements in the City of Riverside Municipal Code Section 19.580.060. The Municipal Code indicates that the parking requirement for stadiums is one space per four fixed seats.

Escility	E۱	ening Hour – Pre-Eve	Daily Traffic	
Facility	Inbound	Outbound Total		
Trip Generation Rates				
Stadium (vehicle trips per spectator)	0.275	0.025	0.30	0.60
Generated Traffic Volumes				
Stadium at Capacity (2,800 spectators)	770	70	840	1,680
Stadium - Average Game (1,000 spectators)	275	25	300	600
Source: Garland 2024 (Appendix 5.7-1).				

Table 5.7-5 Projected Generated Traffic

Table 5.7-5 indicates that a capacity-level event with 2,800 spectators would generate an estimated 840 vehicle trips during the peak hour (770 inbound and 70 outbound) and 1,680 daily trips. A capacity-level event would occur only a few times each year for football games and special events, such as a homecoming football game, a graduation ceremony, and a band/color guard major competition. The stadium would generate fewer vehicle trips for non-capacity football games, track and field events, soccer matches, etc. A game with an average attendance of 1,000 spectators would generate an estimated 300 peak hour trips and 600 daily trips. The TIA is based on a capacity-level event to represent the worst-case scenario.

To quantify the increase in traffic at each intersection resulting from a capacity-level event at the project site, the project generated traffic shown in Table 5.7-5 was geographically distributed onto the street network using the directional percentages. This distribution assumption is based on the layout of the existing street network, the school attendance boundaries, and the anticipated geographical distribution of the event patrons. The site-generated traffic volumes that would be added to each study area intersection by a capacity-level event at the 2,800-seat stadium are shown in Table 5.7-6, *Project Generated Traffic: Friday Evening Peak Hour.*

Intersection	Traffic Volumes
Collett Avenue and La Sierra Avenue	545
La Sierra Avenue/Spaulding Road/School Driveway	840
La Sierra Avenue and Cochran Avenue	286
La Sierra Avenue and Magnolia Avenue	84
Collett Avenue and Jones Avenue	168
Jones Avenue and Cochran Avenue	159
Source: Garland 2024 (Appendix 5.7-1).	

Table 5.7-6Project-Generated Traffic: Friday Evening Peak Hour

The traffic volumes for the existing conditions scenario plus the project generated traffic are shown in Table 5.7-7, *Existing Plus Project Traffic Volumes*.

Intersection	Traffic Volumes
Collett Avenue and La Sierra Avenue	2,595
La Sierra Avenue/Spaulding Road/School Driveway	2,140
La Sierra Avenue and Cochran Avenue	1,701
La Sierra Avenue and Magnolia Avenue	3,704
Collett Avenue and Jones Avenue	1,078
Jones Avenue and Cochran Avenue	389
Source: Garland 2024 (Appendix 5.7-1).	

 Table 5.7-7
 Existing Plus Project Traffic Volumes

The traffic volumes projected for the year 2026 scenario with the proposed stadium are shown in Table 5.7-8, 2026 Traffic Volumes with Project. These projected traffic volumes are for the Friday evening pre-event peak hour.

Table 5.7-8	2026	Traffic	Volumes	with Pro	iect
	2020	manno	voranios		1000

Intersection	Traffic Volumes
Collett Avenue and La Sierra Avenue	2,676
La Sierra Avenue/Spaulding Road/School Driveway	2,191
La Sierra Avenue and Cochran Avenue	1,756
La Sierra Avenue and Magnolia Avenue	3,849
Collett Avenue and Jones Avenue	1,114
Jones Avenue and Cochran Avenue	395
Source: Garland 2024 (Appendix 5.7-1).	

5.7.3.2 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.7-1: The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. [Threshold T-1]

Non-motorized Transportation

The proposed project would generate a demand for non-motorized travel because some event spectators and participants would travel to and from the school as pedestrians or on bicycles.

The proposed project would be consistent with policies supporting alternative transportation because busing would typically be provided from the opposing schools during football games, bicycle lanes are in place adjacent to the school, and bike racks are currently provided at the school. All streets adjacent to the school have sidewalks along both sides of the street. Additionally, three bus stops along RTA Route 15 are located along La Sierra Avenue and provide public transportation to the campus. RTA also operates Route 1 on Magnolia Avenue that provides access to the campus.

Intersection Impact Analysis (Non-CEQA)

While SB 743 has shifted the determination of CEQA impacts from LOS to VMT, LOS is still used by the City as outlined in the City's Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment. Therefore, an LOS evaluation has been included for informational purposes.

The impact analysis for the six study area intersections was conducted by comparing the delay values and LOS for the "Without Project" and "With Project" scenarios. For the existing conditions scenario, the analysis compares the existing conditions to the conditions with the proposed project. Similarly, for the year 2026 scenario, the analysis compares the year 2026 baseline conditions without the proposed project to the year 2026 scenario with the proposed project. The year 2026 was used as the target year for future conditions because that is anticipated to be the year that the proposed project would be completed. The peak hour for the analysis represents the time period during which the project site would generate the heaviest traffic

volumes (typically between 6:00 and 7:00 pm), which does not coincide with the peak period for the ambient traffic volumes, which generally occurs between 4:00 and 6:00 pm.

The comparative levels of service at the study area intersections for the existing conditions scenario are summarized in Table 5.7-9, *Project Impact on Intersection Levels of Service*, for the Friday evening peak hour. Table 5.7-9 shows the before and after delay values and the levels of service that would occur at each study area intersection. Also shown are the increases in the delay values that would occur as a result of the proposed project. The last column in Table 5.7-9 indicates if the intersections would be significantly affected by the project-generated traffic.

Table 5.7-9 indicates that none of the study area intersections would be significantly impacted by the traffic that would be generated by the proposed project for a capacity-level event for the existing conditions baseline scenario.

	Delay Value and Level of Service		Increase in	
Intersections	Existing Conditions	Existing plus Project	Delay Value	Significant Impact
La Sierra Avenue/Collett Avenue	16.5 – B	24.6 – C	8.1	No
La Sierra Avenue/Spaulding Road/School Driveway	5.8 – A	14.6 – B	8.8	No
La Sierra Avenue/Cochran Avenue	8.5 – A	10.8 – B	2.3	No
La Sierra Avenue/Magnolia Avenue	24.2 – C	24.6 – C	0.4	No
Collett Avenue/Jones Avenue	12.5 – B	13.3 – B	0.8	No
Cochran Avenue/Jones Avenue	7.5 – A	8.2 - A	0.7	No
Source: Garland 2024 (Appendix 5.7-1).				

Table 5.7-9 Project Impact on Intersection Levels of Service Existing Conditions as Baseline

Additionally, the comparative levels of service for the year 2026 analysis scenario are shown in Table 5.7-10, *Project Impact of Intersection Levels of Services Year 2026 as Baseline*. Table 5.7-10 indicates that none of the study area intersections would be significantly impacted by the traffic that would be generated by the proposed project for a capacity-level event for the year 2026 baseline scenario.

Table 5.7-10	Project Impact on Intersection Levels of Service Year 2026 as Baseline

	Delay Value and Level of Service		Increase in			
Intersections	Existing Conditions	Existing plus Project	Delay Value	Significant Impact		
La Sierra Avenue/Collett Avenue	16.8 – B	25.5 – C	8.7	No		
La Sierra Avenue/Spaulding Road/School Driveway	5.8 – A	14.8 – B	9.0	No		
La Sierra Avenue/Cochran Avenue	8.6 – A	10.9 – B	2.3	No		
La Sierra Avenue/Magnolia Avenue	25.4 – C	25.8 – C	0.4	No		
Collett Avenue/Jones Avenue	12.8 – B	13.6 – B	0.8	No		
Cochran Avenue/Jones Avenue	7.5 – A	8.2 - A	0.7	No		
Source: Garland 2024 (Appendix 5.7-1).						

Table 5.7-9 and Table 5.7-10 indicate that the proposed project would not have a significant impact at any of the study area intersections during the evening peak hour based on the significance criteria presented previously because the intersections would continue to operate at LOS C or better during a capacity-level event such as a homecoming football game. As the analysis indicates that a capacity-level event with 2,800 spectators would not result in a significant traffic impact, it is concluded that a football game with an average attendance of 1,000 spectators and a soccer match or a track and field event with an attendance of 200 spectators would likewise not result in a significant traffic impact. Therefore, impacts would be less than significant.

Summary

The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities and would not have a significant impact on LOS on the study area intersections. The Circulation and Community Mobility Element of the City of Riverside General Plan includes various policies that outline the objective of building and maintaining a transportation system that combines a mix of transportation modes and transportation system management techniques, such as Policy CCM-8.1, which calls for regular meeting with local school districts to identify safe routes to all schools, enabling better school access by cyclists and pedestrians and support the establishment of safe drop-off and pick-up zones around schools during the morning and afternoon peak hours. Therefore, the proposed project is consistent with the policies presented in the Circulation and Community Mobility Element and would not conflict with any goals or programs of the General Plan. Therefore, impacts would be considered less than significant.

Level of Significance Before Mitigation: Less than significant impact.

Impact 5.7-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). [Threshold T-2]

According to LCI and the California Department of Transportation (Caltrans), projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact and can be screened from a CEQA VMT analysis because they fall into the small project category (Garland 2024).

While a football game at the stadium would result in substantially higher site-generated trip levels than the CEQA threshold of 110 trips per day, the proposed project can be screened from a VMT analysis because the project would result in a decrease in the distance traveled to the events. The CEQA Guidelines state that projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact. The major events and activities that would occur at the project site are currently held at Norte Vista High School, which is approximately 2.5 miles north of the campus and outside the attendance area of La Sierra HS. Since vehicle trips to attend games and practices would occur regardless of the proposed project, the proposed project would not result in any new vehicle trips to the local roadway network during operation.

The proposed project is within the attendance area of La Sierra HS. As such, the proposed project would result in shorter travel distances for most of the La Sierra HS students and patrons who would be attending games, practices, events, and other activities at the project site. Major events at the project site would, therefore, result in a reduction in total vehicle miles traveled and would have no adverse impacts relative to VMT.

In addition, the City's TIA Guidelines state that a project can be screened from requiring a CEQA VMT analysis if the project is a local-serving type of land use. The guidelines specifically state that a local-serving K-12 school falls into this category, and the proposed project can be screened from any further VMT analysis.

Therefore, the project can be screened from any further CEQA VMT analysis and impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant impact.

Impact 5.7-3: The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). [Threshold T-3]

Access to the campus would be provided by three existing driveways at La Sierra HS located on La Sierra Avenue. While the proposed project would result in increased levels of vehicular and non-motorized traffic, these impacts would not be significant because the streets, intersections, and driveways are designed to accommodate the anticipated levels of vehicular and pedestrian activity and have historically been accommodating school-related traffic on a daily basis. The proposed project would be compatible with the design and operation of a high school. Additionally, the proposed project would not result in any major modifications to the existing access or circulation features at the school.

The study area intersections in the TIA have sidewalks on both sides of the street. The intersections along La Sierra Avenue have painted crosswalks and traffic signals with pedestrian crossing phases. These intersections include La Sierra Avenue and Collett Avenue, La Sierra Avenue and Cochran Avenue, La Sierra Avenue and Spaulding Road, and La Sierra Avenue and Magnolia Avenue and have enhanced pedestrian safety that facilitates pedestrian access to the school. Therefore, the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses.

Level of Significance Before Mitigation: Less than significant impact.

Impact 5.7-4: The proposed project would not result in inadequate emergency access. [Threshold T-4]

Emergency access to the campus is provided by the three driveways on La Sierra Avenue and a gated maintenance/emergency access driveway at the intersection of Jones Avenue and Cass Street. The existing access and circulation features at the school, including the driveways, three parking lots, on-site roadways, and fire lanes, would continue to accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. In addition, the proposed project would be designed to accommodate emergency access to the stadium. Any modifications to the access features are subject to and must satisfy the

District design requirements and would be subject to approval by the Riverside Fire Department and California Division of the State Architect. Emergency vehicles could easily access the stadium and all other areas of the school via on-site travel corridors. The proposed project would not result in inadequate emergency access and impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant impact.

Impact 5.7-5: The proposed project would result in inadequate parking capacity during construction, but would not result in inadequate parking during operations. [Threshold T-5]

In 2010, the CEQA guidelines removed the impact threshold pertaining to parking capacity because it was determined that the inconvenience of parking is a social issue, not an environmental issue. Nonetheless, an analysis of the proposed project's parking capacity has been included as it may indirectly result in other impacts. This analysis is meant for informational purposes only and does not impact any of the required CEQA determinations found in Appendix G of the CEQA Guidelines.

Parking During Construction

The primary impact to parking that would occur during construction would occur as a result of the increased parking demand associated with the construction vehicles, including workers' vehicles, trucks, and equipment. In order to ensure that construction parking, including vehicles and equipment, does not impact the public right-of-way and results in a minimal impact to the school parking lots, the District and construction contractor would be required to provide an onsite construction staging area within the school property. This would ensure no impacts would occur to roadway operations and would minimize impacts to parking during construction. Therefore, impacts as a result of construction parking would be less than significant.

Parking During Stadium Events

The City of Riverside Municipal Code has a stadium parking requirement of one parking space per four fixed seats. As the bleachers would have a total of 2,800 seats, the parking requirement would be 700 spaces for a capacity-level event. However, it is anticipated that the average attendance at a football game would be 1,500 spectators and would require 250 parking spaces.

The project proposes to reduce the number of existing parking spaces from 430 to 294, including a reduction of ADA parking spaces from 11 to 9 spaces, in the parking lot at the northwestern corner of the campus. Therefore, the proposed project would be able to accommodate an average event generating 250 vehicles using the on-site parking lot. However, a capacity-level event would generate 700 vehicles, and an additional 406 parking spaces would be needed; capacity-level events are expected to occur one to two times a year throughout the year during events such as graduation or a homecoming game. The anticipated deficiency in parking during capacity-level events would be accommodated by using the parking lots at Collett Elementary School, which is owned and operated by the District, the two other parking lots in the southwestern and southern portions of the campus, and the soccer field in the northwestern part of the campus (which would be accessed via Cass Street). Collectively, these parking areas would provide enough parking for capacity events. Overall, parking impacts during a capacity-level stadium event are not considered significant because

capacity-level events would occur one to two times throughout the school year and there would be sufficient parking to accommodate vehicles during a capacity-level event. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant impact.

5.7.4 Cumulative Impacts

The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system and would be consistent with the policies of the Circulation and Community Mobility Element of the City of Riverside General Plan. Other development projects in the City would be required to ensure consistency with applicable plans and policies, including the City's General Plan. Development projects' consistency with applicable plans and policies would be separately reviewed by the applicable lead agency.

Cumulative changes in VMT can be caused by other development, roadway, and transit infrastructure projects in the region, separate from the proposed project. Because the proposed project is a local-serving land use, the project is screened from requiring a CEQA VMT analysis.

Each development project would be designed to minimize design hazards and incompatible uses, and the design of each development project would be individually evaluated by the lead agency, including in coordination with applicable departments that review transportation and safety (e.g., building and safety, fire department, etc.). This review process would minimize potential impacts from hazardous design features and incompatible uses. Overall, cumulative transportation impacts would be less than significant.

5.7.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, and standard conditions of approval, the following impacts would be less than significant: 5.7-1, 5.7-2, 5.7-3, 5.7-4, and 5.7-5.

5.7.6 Mitigation Measures

No mitigation measures are required.

5.7.7 Level of Significance After Mitigation

All impacts with respect to transportation are less than significant.

5.7.8 References

- Garland Associates (Garland). 2024, March. Traffic Impact Analysis for the Proposed La Sierra High School Track and Field Project: Riverside. Appendix 5.7-1.
- Riverside County Transportation Commission (RCTC). 2019, December. Riverside County Long Range Transportation Study. https://www.rctc.org/wp-content/uploads/2019/12/RCTC-Draft-LRTS -120119-GV22.pdf.

Southern California Association of Governments (SCAG). 2024, April 4. Connect SoCal. https://scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete -040424.pdf?1714175547.

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5. Environmental Analysis

5.8 TRIBAL CULTURAL RESOURCES

This section of the Draft Environmental Report (DEIR) evaluates the potential for implementation of the La Sierra High School Track and Field Project (proposed project) to impact Tribal Cultural Resources (TCR). TCRs include landscapes, sacred places, or objects with a cultural value to a California Native American tribe. Potential impacts to other cultural resources (i.e., historic, archaeological, and disturbance of human remains) are evaluated in Section 5.3, *Cultural and Paleontological Resources*.

This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators; constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1, which would include renovating the track and field; and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

5.8.1 Environmental Setting

5.8.1.1 REGULATORY BACKGROUND

Federal Regulations

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (United States Code, Title 16, Sections 470aa–mm) became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (United States Code, Title 25, Sections 3001 et seq.) is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants and culturally affiliated Indian tribes.

State Regulations

California Public Resources Code Sections 5097.9-5097.991

Archaeological resources are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code (PRC). In addition, cultural resources are recognized as a nonrenewable resource and therefore receive protection under the California PRC and CEQA.

PRC Sections 5097.9–5097.991 provide protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC).

PRC Sections 5097.9-5097.991 also require notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

California Public Resources Code Sections 21073 and 20174

PRC Sections 21073 and 21074 define California Native American tribe and tribal cultural resources, respectively. PRC Section 21073 defines a "California Native American tribe" as a Native American tribe located in California that is on the contact list maintained by the NAHC.

TCRs are defined in Section 21074 as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either included in or determined to be eligible for inclusion in the CRHR, or are included in a local register of historical resources as defined in subdivision (k) of Section 5020.1, or are 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 Section 5024.1.

California Health and Safety Code

California Health and Safety Code Section 7050.5 requires that if human remains are discovered on a project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

California Register of Historical Resources

The California Register of Historic Resources is the state version of the National Register of Historic Resources program. It was enacted in 1992 and became official on January 1, 1993. The California Register was established to serve as an authoritative guide to the state's significant historical and archaeological resources. Resources that may be eligible for listing include buildings, sites, structures, objects, and historic districts. According to subsection (c) of PRC Section 5024.1, a resource may be listed as a historical resource in the California Register if it meets any of the four National Register criteria.

California Senate Bill 18

Existing law provides limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious sites, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.

SB 18 was signed into law in September 2004 and went into effect on March 1, 2005. It placed new requirements upon local governments for developments within or near "traditional tribal cultural places" (ITCP). Per SB 18, the law requires local jurisdictions to provide opportunities for involvement of California Native American

tribes in the land planning process for the purpose of preserving traditional tribal cultural places. The Office of Land Use and Climate Innovation's Tribal Consultation Guidelines, adopted on November 14, 2005, provides advisory guidance to cities and counties on the process for consulting with Native American tribes during the adoption or amendment of local general plans or specific plans. The Tribal Consultation Guidelines recommend that the NAHC provide written information as soon as possible but no later than 30 days after receiving a request to inform the lead agency if the proposed project is determined to be in proximity to a TTCP and another 90 days for tribes to respond to notices provided by local governments if they want to consult to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Prior to the adoption or amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located in the city or county's jurisdiction; the referral must allow a 45-day comment period. The CEQA public distribution list shall include tribes provided by the NAHC. If the NAHC, the tribe, and interested parties agree upon the mitigation measures necessary for the proposed project, they would be included the environmental document of a project.

California Assembly Bill 52

AB 52 took effect July 1, 2015, and requires inclusion of a new section in CEQA documents titled Tribal Cultural Resources, which include heritage sites. Under AB 52, a tribal cultural resource is defined similar to tribal cultural places under SB 18—sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. Or the lead agency, supported by substantial evidence, chooses at its discretion to treat the resources as a tribal cultural resource.

Similar to SB 18, AB 52 requires consultation with tribes at an early stage to determine whether the project would have an adverse impact on any TCRs and if so to identify mitigation measures to protect them. Per AB 52, within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it. The tribe then has 30 days from receiving the notification to respond if it wishes to engage in formal consultation. The lead agency must initiate consultation within 30 days of receiving the request from the tribe. Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a tribal cultural resource, or a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached. Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on tribal cultural resources and discuss feasible alternatives or mitigation that avoid or lessen the impact.

Local Regulations

City of Riverside General Plan

The Historic Preservation Element and Land Use and Urban Design Element of the City of Riverside General Plan includes the following policies related to tribal cultural resources.

- 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-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.
- Policy LU-4.6. Ensure protection of prehistoric resources through consultations with the Native American tribe(s) identified by the Native American Heritage Commission pursuant to Government Code § 65352.3 and as required by the California Environmental Quality Act.

5.8.1.2 EXISTING CONDITIONS

The District has not received notification from California Native American tribes per Public Resources Code Section 21080.3.1, and therefore the provisions for consultation have not been triggered.

Before the City of Riverside was founded in 1870, it was inhabited by Cahuilla tribes; historic resource property types during the pre-1830s include archaeological sites and artifacts, and sacred places and burial grounds that represent Native American culture and adobe dwellings (Riverside 2012). The project site is developed with recreational facilities and a parking lot and is located within a high school campus. As the campus is developed, there is low potential for tribal cultural resources to exist on-site.

5.8.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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 California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
 - ii) 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.8.3 Environmental Impacts

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.8-1: The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). [Threshold TCR-1.i]

As indicated in Impact 5.3-1 of Section 5.3, *Cultural and Paleontological Resources*, of this DEIR, while the campus was determined to be individually eligible for local listing or designation through survey evaluation (5S3), the campus is not listed on a local, state, or federal database as a designated historic resource. Additionally, the campus's 5S3 designation does not relate to TCRs as defined in PRC Section 21074. Therefore, no impact would occur.

Level of Significance Before Mitigation: No impact.

Impact 5.8-2: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency to be significant pursuant to criteria in Public Resources Code section 5024.1(c). [Threshold TCR-1.ii]

As part of the AB 52 process, Native American tribes must submit a written request to the District to be notified of projects within their traditionally and culturally affiliated area. The District must provide written, formal notification to those tribes within 14 days of deciding to undertake a project. The tribe must respond to the District within 30 days of receiving this notification if they want to engage in consultation on the project, and the District must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes under these circumstances 1) the parties agree to mitigation measures to avoid a significant effect on a tribal cultural resource; 2) a party, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached; or 3) a tribe does not engage in the consultation process or provide comments.

The District has not been contacted, per AB 52, and the consultation process has not been triggered. The campus is not identified as an officially designated historic resource in a local, state, or federal database. The project site is currently disturbed with sports facilities and a parking lot. However, because the proposed project would require ground-disturbing activities, there is potential for discovering tribal cultural resources. Therefore, impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially Significant.

5.8.4 Cumulative Impacts

Each related cumulative project would be required to comply with CEQA Guidelines Section 15064.5, which addresses accidental discoveries of archaeological sites and resources, including tribal cultural resources. Therefore, any discoveries of TCRs caused by the proposed project or related projects would be mitigated to a less than significant level. Therefore, impacts of the proposed project would not be cumulatively considerable.

5.8.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.8-1.

Without mitigation, these impacts would be **potentially significant**:

• **Impact 5.8-2** The proposed project could potentially impact tribal cultural resources.

5.8.6 Mitigation Measures

Impact 5.8-2

Implement Mitigation Measure CUL-1.

5.8.7 Level of Significance After Mitigation

Implementation of Mitigation Measure CUL-1 would require all ground disturbing activities to halt in the event cultural resources are encountered and allow a qualified archaeologist to excavate or contact the appropriate Native American tribal contact to excavate such resources, which would reduce potential impacts to archaeological resources to a level that is less than significant.

5.8.8 References

Riverside, City of. 2012. Riverside General Plan, Historic Preservation Element. https://riversideca.gov/ cedd/sites/riversideca.gov.cedd/files/pdf/planning/general-plan/16_Historic_Preservation _Element.pdf.

6. Significant Unavoidable Adverse Impacts

At the end of Chapter 1, *Executive Summary*, is Table ES-1, which summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. Mitigation measures would reduce the level of impact, but the following impacts would remain significant, unavoidable, and adverse after mitigation measures are applied:

Aesthetics

• Impact 5.1-4: The proposed project would result in new sources of substantial light and glare.

Noise

 Impact 5.6-2: Project implementation would generate a substantial increase in noise near existing residences during operational activities.

6. Significant Unavoidable Adverse Impacts

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7. Alternatives to the Proposed Project

7.1 INTRODUCTION

7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the proposed project.

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are:

- "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (CEQA Guidelines Section 15126.6[b])
- "The specific alternative of 'no project' shall also be evaluated along with its impact." (CEQA Guidelines Section 15126.6[e][1])
- "The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." (CEQA Guidelines Section 15126.6[e][2])
- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." (CEQA Guidelines Section 15126.6[f])
- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire,

7. Alternatives to the Proposed Project

control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (CEQA Guidelines Section 15126.6[f][1]).

- "Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (CEQA Guidelines Section 15126.6[f][2][A])
- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (CEQA Guidelines Section 15126.6[f][3])

For each development alternative, this analysis:

- Describes the alterative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, "[i]f an alternative would cause...significant effects in addition those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."

7.1.2 Project Objectives

As described in Chapter 3, *Project Description*, in Section 3.2, *Statement of Objectives*, the following objectives have been established for the proposed project and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts.

- 1. Provide adequate stadium facilities at the La Sierra High School to accommodate school sport games and school events at the campus without the need for using remote sites.
- 2. Provide lighting to allow night use of the track and field to accommodate school-related events and activities.
- 3. Provide bleachers with adequate capacity to accommodate various spectator events currently held on and off campus.
- 4. Utilize existing space to enhance opportunities for after-school athletic and extracurricular activities.
- 5. Enhance sense of community by allowing home games on campus.
- 6. Upgrade the athletic fields to boost school pride.
7.2 ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this EIR.

7.2.1 Alternative School Site

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (CEQA Guidelines Section 15126[5][B][1]). In general, any development of the size and type proposed by the project in a different location would have substantially the same impacts on air quality, cultural and paleontological resources, energy, greenhouse gas emissions, and tribal cultural resources; however, impacts to aesthetics (lighting), noise, and transportation could differ (i.e., either greater or lesser impacts). The District does not own any other properties in proximity to the campus that could be used for the proposed project and, while the District considered relocating the proposed project to another school within the District, it was determined that there are no other schools that can accommodate the proposed project. Additionally, relocating the proposed project to an alternative site would not meet the project objective of consolidating La Sierra High School's sports games and events at the project site. Therefore, this alternative is rejected from further consideration.

7.2.2 Relocating Track and Field on the Campus

The District considered other locations on the La Sierra High School campus where the proposed track and field, as envisioned under the proposed project, could be relocated. The following three options were considered:

- Option 1. Relocate the track and field to the southeastern corner of the campus; see Figure 7-1, Option 1

 Relocate Track and Field to Southeastern Corner of Campus.
 - **Pros:** Separation of home and away softball field.
 - **Cons:** Existing softball field would need to be relocated and the existing area would need to be renovated, the existing practice soccer field would be removed and a practical location cannot be identified, the existing solar arrays would need to be removed and relocated, difficult access to the field, new parking would not be able to accommodate the required number of patrons, the existing track and field would need to be renovated, and this option would cost an additional \$8.9 million compared to the proposed project.
- **Option 2.** Switch the locations of the practice soccer field and the track and field; see Figure 7-2; *Option 2 Switch Locations of Practice Soccer Field and Track and Field to Southeastern Corner of Campus.*

- **Pros:** Separation of home and away soccer field and adding new parking to the campus.
- **Cons:** The existing practice soccer field would need to be relocated, the existing solar arrays would need to be removed and relocated, the junior varsity baseball field would be eliminated, and this option would cost an additional \$10.4 million compared to the proposed project.

Therefore, as this alternative would result in the loss and/or relocation of facilities and would be cost prohibitive, this alternative is rejected from further consideration.









Source: Huckabee Architects.

La Sierra High School Boundary

300

Scale (Feet)

7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Based on the criteria listed in Section 7.1, the following two alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the project, but which may avoid or substantially lessen any of the significant effects of the proposed project. These alternatives are analyzed in detail in the following sections.

- No Project
- Relocation of the Track and Field to the Northeastern Corner of the Campus

An EIR must identify an "environmentally superior" alternative and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify an environmentally superior alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral, or inferior. Section 7.6 identifies the Environmentally Superior Alternative. The preferred land use alternative (proposed project) is analyzed in detail in Chapter 5 of this EIR.

7.4 NO PROJECT ALTERNATIVE

The CEQA Guidelines require an analysis of a No Project Alternative. The purpose of this alternative is to describe and analyze a scenario under which the proposed project is not implemented so that decision makers can compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The No Project Alternative analysis must discuss the existing site conditions as well as what would reasonably be expected to occur in the foreseeable future based on any current plans, and it must be consistent with available infrastructure and community services.

Under the No Project Alternative, the project site would not be developed with the proposed improvements, and the existing facilities would remain. Use of the existing facilities, as they are currently, would also remain the same with some sporting games and events occurring on-site and others occurring at other schools within the District.

7.4.1 Aesthetics

Under this alternative, existing facilities would remain as is. As a result, there would be no impacts to visual/aesthetics resources because no new physical development would occur on-site. This alternative would not install any stadium lights and as such, this alternative would not create impacts related to light and glare. Therefore, this alternative would eliminate the proposed project's significant and unavoidable impacts, and no impacts would occur.

7.4.2 Air Quality

Under this alternative, no construction or new operational activities would occur. As such, no new emissions would be generated. Therefore, this alternative would eliminate the proposed project's less-than-significant impacts.

7.4.3 Cultural and Paleontological Resources

No ground-disturbing activities would occur under this alternative as no construction would occur. This alternative would eliminate the proposed project's potentially significant impacts, and no mitigation measures would be required.

7.4.4 Energy

No construction or new operational activities would occur under this alternative, and no new energy consumption would be generated. This alternative would eliminate the proposed project's less-than-significant impacts.

7.4.5 Greenhouse Gas Emissions

No construction or new operational activities would occur under this alternative, and no new emissions would be generated. This alternative would eliminate the proposed project's less-than-significant impacts.

7.4.6 Noise

No construction or new operational noise and vibration would be generated under this alternative. This alternative would eliminate the proposed project's significant and unavoidable impacts.

7.4.7 Transportation

Under this alternative, the consolidation of trips, from other schools to the project site, would not occur, and impacts would be greater than the proposed project. However, this alternative would eliminate the proposed project's potentially significant impact, and no mitigation measures are required.

7.4.8 Tribal Cultural Resources

No earthwork or soil disturbance would occur under this alternative, and any undiscovered subsurface cultural resources at the project site would not be altered. This alternative, compared to the proposed project, would eliminate the proposed project's potentially significant impact, and no mitigation measures are required.

7.4.9 Conclusion

The No Project Alternative would eliminate impacts to all the environmental topics analyzed in the EIR, except transportation. While transportation impacts under this alternative would be slightly greater than the proposed project, this alternative would eliminate the proposed project's potentially significant impacts. The No Project Alternative would not meet any of the project objectives.

7.5 RELOCATION OF THE TRACK AND FIELD TO THE NORTHEASTERN CORNER OF THE CAMPUS ALTERNATIVE

Under this alternative, the proposed track and field and associated improvements, as envisioned under the proposed project, would be relocated to the northeastern corner of the La Sierra High School campus (i.e., east of its current location), as shown in Figure 7-3, *Relocation of the Track and Field to the Northeastern Corner of the Campus Alternative.* To accommodate the relocated to the southeastern corner of the campus, the baseball and softball fields would be relocated to the southeastern corner of the campus, and the soccer field would be relocated to where the existing track and field is located (east of the existing parking lot). The orientation of the track and field under this alternative would be similar to the proposed project but would be positioned south of Collett Elementary School. One of the solar arrays at the southeastern corner of the campus would be relocated elsewhere to accommodate the baseball and softball fields. Compared to the proposed project's cost, this alternative would result in an increased cost of \$10.8 million.

7.5.1 Aesthetics

Under this alternative, the existing sports facilities would be relocated elsewhere on the campus to accommodate the relocation of the track and field to the northeastern corner of the campus. The relocated track and field would be a use consistent with a high school campus. As such, the visual character of the campus under the proposed project and this alternative would be the similar and less than significant.

Under the proposed project, the track and field would be adjacent to the residences on Arrowwood Drive, and under this alternative, the track and field would be located south of Collett Elementary School. Under this alternative, less residences would be impacted compared to the number of residences impacted under the proposed project, because the light poles would be further away and west of the residences on Jones Avenue, as opposed to placing the light poles directly south of the residences on Arrowwood Drive (as envisioned under the proposed project). While the light and glare impacts under this alternative would be reduced compared to the proposed project, there is a possibility that light and glare may impact the residences to the east of the campus. Therefore, this alternative would result in reduced impacts compared to the proposed project, but even with the implementation of mitigation measures, impacts would have the potential to be significant and unavoidable.

7. Alternatives

Figure 7-3 – Relocation of the Track and Field to the Northeastern Corner of the Campus Alternative NOTES 1 NEW TRACK AND FIELD 2 RELOCATED BASEBALL FIELD RELOCATED SOLAR ARRAY RELOCATED SOFTBALL FIELD RELOCATED SOCCER FIELD NEW CONCESSION, TICKET, AND TOILET BUILDINGS HOME BLEACHERS WITH PRESS BOX WITH 2000 (7) SEATS 8 AWAY BLEACHERS WITH 800 SEATS 9 EXISTING PARKING LOT 10 PARKING ACCESS PROS A MINIMIZE NOISE TO RESIDENTS ADJACENT TO FIELD B SEPARATION OF HOME AND AWAY ADJACENT TO EXISTING LARGE PARKING LOT AND

D La Sierra High School Boundary





300

7.5.2 Air Quality

Under this alternative, construction impacts would be greater than the proposed project as additional grounddisturbing and demolition activities would be needed to accommodate the relocation of the track and field, as well as the soccer, baseball, and softball fields. The relocation of the track and field would require demolition of the existing facility to accommodate the relocation of the soccer field. Because the construction schedule is dependent on when students are on campus, the additional ground-disturbing activities are expected to occur within the same construction schedule as that of the proposed project. During the operational phase, this alternative would result in similar vehicle trips and vehicle miles traveled (VMT) impacts compared to the proposed project because the proposed number of patrons and events would not change under this alternative. Similar to the proposed project, this alternative would be subject to the implementation of all applicable regulatory requirements. Construction impacts of this alternative would be greater than the proposed project, and operational impacts would be similar to the proposed project. Because an increase in acres of ground disturbance is expected to occur in the same construction schedule as the proposed project under this alternative, this alternative has the potential to result in substantially greater construction air quality impacts than the proposed project, but will still result in less-than-significant impacts.

7.5.3 Cultural and Paleontological Resources

While this alternative would result in more ground-disturbing activities, the potential to discover cultural or paleontological resources would be similar to the proposed project; the campus is fully developed with buildings and sports facilities and was previously disturbed. As with the proposed project, this alternative would require mitigation measures to reduce impacts to less than significant.

7.5.4 Energy

Under this alternative, energy consumption would be similar to the proposed project for the construction and operational phases. Similar to the proposed project, this alternative would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, impacts of this alternative would be less than significant, as with the proposed project.

7.5.5 Greenhouse Gas Emissions

Under this alternative, construction impacts would be greater than the proposed project as additional grounddisturbing and demolition activities would be needed to accommodate the relocation of the track and field, as well as the soccer, baseball, and softball fields. The relocation of the track and field would require demolition of the existing facility to accommodate the relocation of the soccer field. During the operational phase, this alternative would result in similar vehicle trips and VMT impacts compared to the proposed project because the proposed number of patrons and events would not change under this alternative. Similar to the proposed project, this alternative would be subject to the implementation of all applicable regulatory requirements. Construction impacts of this alternative would be greater than the proposed project, this alternative would result in less-than-significant impacts.

7.5.6 Noise

Under this alternative, construction impacts to nearby receptors related to noise, short-term groundborne vibration, and groundborne noise would be similar to the proposed project because construction noise and vibration would be temporary, like the proposed project. During the operational phase, impacts would be less for some of the nearby sensitive receptors, but more for other nearby receptors. Specifically, some of the residences along Arrowwood Drive would experience less operational noise impacts because the track and field would be further east compared to the proposed project. However, some residences along Jones Avenue would experience operational noise impacts because the location of the track and field would be moved to the northeast corner of the campus, closer to Jones Avenue. As such, the noise mitigation measures of the proposed project would also be applied to this alternative. Also, noise impacts from the relocation of the varsity baseball field, softball field, and practice soccer field would be similar to the proposed project. Overall, construction impacts of this alternative would be similar to the proposed project, and operational impacts would be less than the proposed project, but still significant and unavoidable.

7.5.7 Transportation

This alternative would result in additional construction activities compared to the proposed project, and therefore, the number of construction trips would be greater than the proposed project. During operational activities, transportation impacts would be similar to the proposed project as there would be no changes to the sports programming, events schedule, or bleacher capacity. Similar to the proposed project, this alternative would result in less-than-significant impacts.

7.5.8 Tribal Cultural Resources

While this alternative would result in more ground-disturbing activities, the potential to discover tribal cultural resources would be similar to the proposed project; the campus is fully developed with buildings and sports facilities and was previously disturbed. As with the proposed project, this alternative would require mitigation to reduce impacts to less than significant.

7.5.9 Conclusion

The Relocation of the Track and Field to the Northeastern Corner of the Campus Alternative would result in less glare and light (aesthetics) impacts and similar impacts to the proposed project for cultural, paleontological, tribal cultural resources, and energy. Air quality, greenhouse gas emissions, and transportation impacts would be greater than the proposed project during construction and the same during operational activities. Noise impacts would be similar to the proposed project during construction, and less during operation. No Significant and Unavoidable Impacts for the proposed project's objectives, it would cost an additional \$10.8 million compared to the proposed project, which is cost prohibitive, and would limit the District's budget for other safety- and security-related projects.

7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative" and, in cases where the "No Project" Alternative is environmentally superior to the proposed project, the environmentally superior development alternative must be identified. One alternative has been identified as "environmentally superior" to the proposed project:

Relocation of the Track and Field to the Northeastern Corner of the Campus Alternative

The Relocation of the Track and Field to the Northeastern Corner of the Campus Alternative has been identified as the environmentally superior alternative. While this alternative would lessen the significance of aesthetics and noise impacts, this alternative does not completely eliminate the significant and unavoidable impacts of the proposed project. Additionally, this alternative, while it meets all project objectives, is cost-prohibitive as it requires an additional \$10.8 million in addition to the cost of the proposed project.

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California Public Resources Code Section 21003 (f) states: "...it is the policy of the state that...[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." This policy is reflected in the State California Environmental Quality Act (CEQA) Guidelines (Guidelines) Section 15126.2(a), which states that "[a]n EIR [Environmental Impact Report] shall identify and focus on the significant environmental impacts of the proposed project" and Section 15143, which states that "[t]he EIR shall focus on the significant effects on the environment." The Guidelines allow use of an Initial Study to document project effects that are less than significant (Guidelines Section 15063[a]). Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant, and were therefore not discussed in detail in the DEIR (Chapter 5).

As required by Section 15128 of the CEQA Guidelines, an EIR shall contain a brief discussion stating the reasons why various possible significant effects of a project were determined not to be significant and are therefore not discussed in detail in the EIR. In accordance with the CEQA Guidelines, this Section discusses the environmental issue areas where impacts were found to not be significant and were therefore not discussed in detail in Chapter 5 of the DEIR. This Section includes the analysis for the following environmental topics where the proposed project impacts were determined not to be significant:

- Agriculture and Forestry Resources
- Biological Resources
- Hydrology and Water Quality
- Hazards and Hazardous Population and Housing Materials
 - Recreation
 - Geology and Soils
- Land Use and Planning
- Public Services

Cultural Resources

- Utilities and Service Systems
- Wildfire

Noise

- Mineral Resources
- The following eight topics are analyzed in Chapter 5 of this DEIR.
- Aesthetics

Air Quality

Energy

- Greenhouse Gas Emissions
- Transportation
- Tribal Cultural Resources
- This DEIR analyzes the scope of both phases of the proposed project, which would include renovating the track and field; adding field lighting, PA system, scoreboard, and bleachers to accommodate 2,800 spectators;

constructing a 5,500-square-foot field house; and repaving and restriping the 134,000-square-foot parking lot. The tennis courts would be relocated approximately 10 feet south, a new access from the parking lot to the bleachers would be constructed, and the number of parking spaces would be reduced by 136 parking stalls. However, until funding for Phase 2 is available, the District will move forward with the construction of Phase 1, which would include renovating the track and field; and adding field lights, PA system, scoreboard, and bleachers to accommodate 1,200 spectators.

8.1 AGRICULTURE AND FORESTRY RESOURCES

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The project site is within the La Sierra HS campus, which is in an urbanized neighborhood, and therefore there are no agricultural uses on campus or within the vicinity. The proposed project would not convert any farmland identified on the state's Farmland Mapping and Monitoring Program to non-agricultural uses. The Farmland Mapping and Monitoring Program designates the campus and surrounding areas as urban and built-up land (DOC 2024a). Therefore, no impact would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The campus and surrounding area are not zoned for agricultural uses; the campus is zoned Single Family Residential (R-1-7000) (Riverside 2024a). Additionally, the campus is not under a Williamson Act contract (DOC 2024b). Therefore, implementation of the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. La Sierra HS is zoned Single Family Residential (R-1-7000) (Riverside 2024a). The project area is urbanized and does not contain forest land or timberland. Therefore, the proposed project would not conflict with existing areas zoned for forest land or timberland, and no impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed project would occur within the boundaries of the campus and would not conflict with existing areas zoned for forest land or timberland. The campus and surrounding areas are urbanized and do not contain forest land or timberland. No impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The proposed project would occur within the boundaries of the existing La Sierra HS campus. The campus and surrounding area are designated as urban and built-up land, and do not contain farmland, forest land, or timberland. Therefore, the proposed project would not result in any changes to farmland, forest land or timberland, and no impact would occur.

8.2 BIOLOGICAL RESOURCES

Would the project:

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 Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact. Special status species include those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act; species otherwise given certain designations by the California Department of Fish and Wildlife; and plant species listed as rare by the California Native Plant Society. The surrounding area and campus, including the project site, are disturbed with developed uses and are subject to daily human disturbances.

The City of Riverside's Open Space and Conservation Element identifies a variety of biological resources and areas protected under the Western Riverside Multiple Habitat Conservation Plan (MSHCP); Stephens' Kangaroo Rat Habitat Conservation Plan (HCP), Lake Matthews MSHCP and Natural Community Conservation Plan, and the El Sobrante Landfill HCP, which include endangered or threatened species throughout the City (Riverside 2012). Figure OS-5, Habitat Areas and Vegetation Communities, of the Riverside General Plan identifies special status plants and vegetation communities within the City; the campus is within a "Residential/Urban/Exotic" area, and does not contain special status species (Riverside 2012). The western portion of Riverside County, including the project site, is within the Western Riverside MSHCP area administered by the Western Riverside County Regional Conservation Authority (RCA) (CDFW 2024). While the project site is within the MSHCP boundaries, it does not contain any conserved lands. The closest conservation area is approximately 3.4 miles southeast of the campus (RCA 2024). Figure OS-6, Stephens' Kangaroo Rat (SKR) Core Reserves and Other Habitat Conservation Plans, of the General Plan identifies the project site is not within an area of the City protected under an HCP. The project site and surrounding area are outside of any federally designated critical habitat (USFWS 2023a).

The project site is already disturbed and developed as part of an existing high school campus and there is no suitable breeding or foraging habitat on-site for any sensitive species. The proposed project would not result in direct or indirect impacts on any candidate, sensitive, or special status species or the elimination or modification of any natural habitat, which may provide habitat for any sensitive or special status species. Impacts would be less than significant.

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

No Impact. Sensitive natural communities are natural communities that are considered rare in the region by regulatory agencies, that are known to provide habitat for sensitive animal or plant species, or are known to be important wildlife corridors. The campus is within the Western Riverside County RCA MSHCP; however, the project site does not contain any conserved lands (CDFW 2024). The nearest conservation area is approximately 3.4 miles southeast of the campus (RCA 2024). Figure OS-6, Stephens' Kangaroo Rat (SKR) Core Reserves and Other Habitat Conservation Plans, of the General Plan identifies the project site is not within an area of the City protected under an HCP. No federally designated critical habitat exist on site or in the vicinity of the campus (USFWS 2024a). Additionally, according to the National Wetlands Mapper, no wetlands or riverine habitats exist on campus or in the immediate vicinity of campus (USFWS 2024b). Therefore, no impacts to riparian sensitive natural communities would occur.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site is within the La Sierra HS campus and is developed with athletic facilities and a parking lot. As discussed in Impact 8.2(b), the National Wetlands Mapper did not identify riverine or wetland habitats on campus (USFWS 2024b). Therefore, the proposed project would not have a substantial adverse effect on protected wetlands, and no impact would occur.

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 native wildlife nursery sites?

No Impact. The project site is in an urbanized area of the City of Riverside. The project site is developed with athletic facilities and a parking lot. Construction and operation of the proposed project would be limited to the project site. No federally designated critical habitat exist on site or in the vicinity of the campus (USFWS 2024a). The proposed project would not remove any trees, which could be used by migratory birds. Therefore, no impact would occur.

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

No Impact. The City of Riverside's Municipal Code includes Chapter 16.40, Threatened and Endangered Species Preservation Development Fees, which requires funding for the cost of preparation and implementation of preservation plans. Chapter 16.72, Western Riverside Multiple Species Habitat Conservation Plan Fee Program, establishes a fee to protect species and vegetation, and Section 13.25.020, Removal, Trimming, and Trenching Around, states that no trees or shrubs within the public streets can be removed. The project site is currently developed with recreational facilities and a parking lot and is part of an existing campus in an urbanized portion of the City. The proposed project would occur within the footprint

of the project site. Therefore, these ordinances do not apply to the proposed project. As such, the proposed project would not conflict with ordinances or policies protecting biological resources and no impact would occur.

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?

No Impact. The project site is within the Western Riverside County MSHCP; however, the campus does not contain any conserved lands or federally designated critical habitat (CDFW 2024; USFWS 2024a). The nearest conservation area is approximately 3.4 miles southeast of the campus (RCA 2024). Additionally, Figure OS-6, Stephens' Kangaroo Rat (SKR) Core Reserves and Other Habitat Conservation Plans, of the General Plan identifies that the project site is not within an area of the City protected under an HCP. The project site is within a developed campus in an urbanized area. As discussed in Impact 8.2(a), there are no sensitive habitats onsite. Therefore, no impact would occur.

8.3 GEOLOGY AND SOILS

Would the project:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. Alquist-Priolo earthquake fault zones are regulatory zones surrounding the surface traces of active faults in California. Wherever an active fault exists, if it has the potential for surface rupture, a structure for human occupancy cannot be placed over the fault and must be a minimum distance from the fault (generally 50 feet). An active fault, for the purposes of the Alquist-Priolo Act, is one that has ruptured in the last 11,000 years (DOC 2024c).

According to the California Department of Conservation's Fault Activity Map, La Sierra HS is not within an Alquist-Priolo Earthquake zone (DOC 2024d). The closest Alquist-Priolo Earthquake zone is approximately the Elsinore Fault approximately 8 miles west of La Sierra HS. The proposed project would comply with the 2022 California Building Code (CBC) and Division of the State Architect (DSA) criteria for seismic safety. Therefore, impacts would be less than significant.

ii) Strong seismic ground shaking?

Less Than Significant Impact. Southern California is a seismically active region. Impacts from ground shaking could occur many miles from an earthquake epicenter. The potential severity of ground shaking depends on many factors, including the distance from the originating fault, the earthquake magnitude, and the nature of the earth materials beneath a given site. According to the City of Riverside General

Plan's Public Safety Element, there are no known faults traverse the City; however, the potential for seismic activity exist due to the San Andreas Fault, San Jacinto fault, and the Elsinore Fault approximately 22.25 miles northeast, 15 miles northeast, and 8 miles west away from the project site, respectively (DOC 2024d). The proposed project would be developed in accordance with the applicable 2022 CBC and DSA criteria for seismic safety. Compliance with established standards would reduce the risk of structural collapse or other shaking-related hazards to a less than significant level.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction refers to loose, saturated sand, or gravel deposits that lose their load-supporting capability when subjected to intense shaking. Liquefaction potential varies based upon three main contributing factors: 1) cohesionless, granular soils having relatively low densities (usually of Holocene age); 2) shallow groundwater (generally less than 50 feet); and 3) moderate to high seismic ground shaking. According to the City of Riverside General Plan Figure CP-2, Liquefaction Zones, the project area has a high liquefaction potential (Riverside 2021). However, the proposed project would be designed in compliance with the 2022 CBC and the DSA criteria for liquefaction impacts. Compliance with established standards would reduce the risk of liquefaction hazards to a less than significant level.

iv) Landslides?

Less Than Significant Impact. Landslides are a type of erosion in which masses of earth and rock move downslope as a single unit. Susceptibility of slopes to landslides and lurching (earth movement at right angles to a cliff or steep slope during ground shaking) depend on several factors that are usually present in combination—steep slopes, condition of rock and soil materials, presence of water, formational contacts, geologic shear zones, and seismic activity. La Sierra HS is generally flat and contains no unusual geographic features or slopes. In the absence of significant ground slopes, the potential for landslides is considered negligible. The proposed project would be designed to meet the 2022 CBC and DSA requirements. Therefore, impacts would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Erosion is a normal and inevitable geologic process whereby earthen materials are loosened, worn away, decomposed, or dissolved and removed from one place and transported to another. The project site is flat terrain, which decreases the proposed project's potential to accelerate erosion. The project site is developed with existing athletic facilities and parking lot.

Implementation of the proposed project would require limited earthwork which may include grading, hardscape demolition, drilling holes, and utility trenching. Because the proposed project encompasses an area of more than one acre, the proposed project would be subject to the National Pollutant Discharge Elimination System (NPDES) permit requirements. These include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) which would describe construction best management practices (BMPs) for erosion control at the site.

The proposed project would adhere to local policies which includes City Municipal Code Title 17, Grading, which includes general requirements and dust control, erosion control, landscaping requirements that aim to protect public health, safety and welfare. Additionally, adherence with existing state requirements regulating construction activities, such as the 2022 CBC, as well as DSA review would minimize soil erosion. Therefore, the proposed project would not result in a substantial soil erosion or loss of topsoil, and a less than significant impact would occur.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. As discussed in Impact 8.3(a.iii) and Impact 8.3(a.iv), liquefaction and landslide impacts would be less than significant because the proposed project would be constructed in compliance with the applicable the 2022 CBC and DSA requirements.

Lateral spreading is a phenomenon where large blocks of intact, non-liquefied soil move downslope on a large, liquefied substratum. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff, and has been known to move on slope gradients as little as one degree. The topography of the project site is generally flat. Therefore, impacts from lateral spreading would be less than significant.

Subsidence and collapse are generally due to substantial overdraft of groundwater or underground petroleum reserves. Collapsible soils may appear strong and stable in their natural (dry) state, but they rapidly consolidate under wetting, generating large and often unexpected settlements. Seismically induced settlement consists of dynamic settlement of unsaturated soil (above groundwater) and liquefaction-induced settlement (below groundwater). These settlements occur primarily in low-density sandy soil due to the reduction in volume during and shortly after an earthquake. According to the Area of Land Subsidence in California Mapper, the campus is not within an area of recorded subsidence due to groundwater pumping (USGS 2024). Additionally, the proposed project would be constructed in compliance with the applicable 2022 CBC and DSA requirements. Impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No Impact. Highly expansive soils, which swell when they absorb water and shrink as they dry, can cause structural damage to building foundations. Therefore, they are less suitable for development than nonexpansive soils. According to Figure PS-3, Soils with High Shrink-Swell Potential, of the Riverside General Plan, the campus is not within an area susceptible to high shrink-swell (Riverside 2021). Additionally, the proposed project would be constructed in compliance with the applicable 2022 CBC and DSA requirements. Therefore, no impact would occur.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. Development of the proposed project would not require the installation of a septic tank or alternative wastewater disposal system. The proposed project would utilize the local sewer system. Therefore, no impacts would result from septic tank or other onsite wastewater disposal systems.

8.4 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less Than Significant Impact. Construction of the proposed project would require small amounts of hazardous materials during construction, such as vehicle fuels, lubricants, grease and transmission fluids, and paints and coatings. The handling, use, transport, and disposal of hazardous materials during the construction phase of the proposed project would be required to comply with existing regulations of several agencies—the Environmental Protection Agency (EPA), California Division of Occupational Safety and Health, US Occupational Safety and Health Administration (OSHA), and US Department of Transportation (USDOT).

Operation of the proposed project would transport, use, store, and dispose of small amounts of hazardous materials typical of school facilities such as cleaning and maintenance supplies (cleaners, gasoline, paint and pesticides). Compliance with applicable federal and state laws and regulations governing the use, storage, transport, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts to occur. These materials would be used in accordance with normal operational safety practices, as employed at other school facilities within the District. Therefore, the proposed project would not create substantial hazards to the public or the environment. Impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. The project site is currently developed with the existing athletic facilities and a parking lot and is within the La Sierra HS campus. The following five environmental databases were utilized to identify hazardous materials within a quarter mile of the campus:

- **GeoTracker.** State Water Resources Control Board (SWRCB 2024)
- EnviroStor. Department of Toxic Substances Control (DTSC 2024)
- **EJScreen.** US Environmental Protection Agency (EPA 2024a)
- EnviroMapper.US Environmental Protection Agency (EPA 2024b)

 Solid Waste Information System (SWIS). California Department of Resources Recovery and Recycling (CalRecycle 2024).

Table 8-1, *Hazardous Waste Sites Within 0.25-Mile of the Campus*, lists all the hazardous waste sites within 0.25 mile of the campus.

Site Address	Database	Identifier	Cleanup Status	Proximity to Site
4145 La Sierra Avenue, Riverside, CA (La Sierra High School) (CAL000089070)	EnviroMapper	Non RCRA Hazardous Waste Liquid (Water, Specimens)	Inactive (expired: 6/30/2021)	On Campus
11130 Spaulding Drive, Riverside, CA (CAC002990333)	EnviroMapper	Asbestos	Inactive (expired: 2/22/2019)	0.22 miles west
3935 La Sierra Avenue, Riverside, CA (CAC003006588)	EnviroMapper	Asbestos	Inactive (expired: 6/20/2019)	0.23 miles south
4010 Jones Avenue, Riverside, CA (CAC002968850)	EnviroMapper	N/A	Inactive (expired: 9/28/2018)	0.23 miles east
10750 Cochran Avenue, Riverside, CA (33790002)	EnviroStar	Soil contamination	No Action Required 10/2/2018	0.25 miles east
Source: EPA 2024b; DTSC 2024.				

 Table 8-1
 Hazardous Waste Sites Within 0.25-mile of the Campus

As shown in Table 8-1, there are five sites within a quarter mile of the campus, including on the campus. The cleanup status for all of these hazardous sites is "inactive" or "no action is required"; therefore, the potential for the contaminants of concern to impact the proposed project is unlikely.

As discussed in Impact 8.4(a), construction activities would require small amounts of hazardous materials, which may include vehicle fuels, lubricants, grease and transmission fluids, and paints and coatings. The use, transportation, and disposal of hazardous materials would be in accordance with regulatory standards and manufacturers' specifications. Hazardous materials would be used in small quantities and properly stored, so they do not pose health and safety hazards. Operation of the proposed project would transport, use, store, and dispose of small amounts of hazardous materials typical of school facilities, such as cleaning and maintenance supplies (such as cleaners, gasoline, paint and pesticides). Compliance with applicable federal and state laws and regulations governing the use, storage, transport, and disposal of hazardous materials would not create a significant hazard to the public or environment, and impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. The project site is on the existing La Sierra HS campus. In addition, the project site is adjacent to Collett Elementary School, directly north of La Sierra HS. As discussed in Impact 8.4(a), construction and operation of the proposed project would handle small amounts of hazardous materials typical of construction activities and scholastic athletic activities (during operation). The use, transportation, and storage of hazardous materials would be required to comply with all applicable state and federal regulations. As discussed in Threshold 8.4(b), there is no evidence of an active hazardous waste site on the project site or within a 0.25-mile radius of the campus that could release or threaten release of hazardous materials. The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Therefore, impacts would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant Impact. As indicated in Impact 8.4(b), five environmental databases were utilized to identify hazardous materials within a quarter mile of the campus. As shown in Table 8-1, although the La Sierra HS campus is identified by EnviroMapper as a hazardous waste site, the site was determined to be an inactive hazardous waste site and has been cleaned up in accordance to state and federal policies. All identified hazardous sites are "inactive" or "no action is required," therefore, the potential for the contaminants of concern to impact the proposed project is unlikely. The project would not create a hazard to the public because of a hazardous materials site pursuant to Government Code Section 65962.5. A less than significant impact would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The closest airport to the campus is the Riverside Municipal Airport, approximately 2.8 miles northwest of the campus. The campus is outside the Riverside Municipal Airport influence area boundary and the land use compatibility plan (RCALUC 2005). Therefore, the proposed project would not interfere with inbound or outbound flights, and implementation of the proposed project would not result in safety hazards or excessive noise impacts for people residing or working in the project area. No impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed project would occur within the existing La Sierra HS boundaries, and the proposed project would not impair or interfere with any emergency response or evacuation plan, such as the City of Riverside Emergency Operations Plan (EOP).

The surrounding roadways would continue to provide emergency access through the project area and to the surrounding properties during construction of the proposed project. In the event that a temporary closure of any street is required, the project's contractor would be required to provide the City of Riverside with a construction schedule and plans for closure of the street and to ensure that the placement of construction materials and equipment does not obstruct a detour route. The project's contractor would be required to comply with all applicable requirements of the City's Fire Department, as applicable, for reducing impacts to emergency response or evacuation plans. On-site emergency response would continue to be facilitated through the use of the school's driveways and parking lot, which would provide emergency vehicle access to the athletic facilities. The District would be required to obtain approval from the City's Fire Department on site design, including emergency access routes, prior to the start of construction. Additionally, development plans and site design would be reviewed by the DSA. Therefore, impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less Than Significant Impact. The campus is in an urbanized area surrounded by development, and is not within a Very High Fire Hazard Severity Zone (CAL FIRE 2023, Riverside 2021). The proposed project is not expected to expose people or structures to risks related to wildland fires. Additionally, the proposed project would be required to comply with all applicable fire safety regulations, including the 2022 California Fire Code (CFC). Therefore, impacts would be less than significant.

8.5 HYDROLOGY AND WATER QUALITY

Would the project:

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

Less Than Significant Impact.

Construction

Clearing, grading, and construction activities associated with the proposed project may impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. The refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, the proposed project would be required to comply with the NPDES Construction General Permit (CGP) as well as prepare a SWPPP that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The CGP requires that prior to the start of construction activities, the District must file permit registration documents (PRDs) with the State Water Resources Control Board (SWRCB), which includes a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction

water balance calculations. The construction contractor is required to maintain a copy of the SWPPP on-site at all times and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the issuance of a grading permit, the District is required to provide proof of filing of the PRDs with the SWRCB, which include preparation of SWPPP.

The SWPPP must describe construction BMPs that address pollutant source reduction and provide measures/controls to mitigate potential pollutant sources which include, but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials and waste management, and good housekeeping practices. Construction BMPs examples include: soil binders, straw mulch, velocity dissipation devices, slope drains, sediment basin, sediment trap, sandbag barrier, straw bale barrier, storm drain inlet protection, chemical dust suppressants. Submittal of the PRDs and implementation of the SWPPP and its associated BMPs throughout the construction phase would result in an impact of less than significant.

Operation

Once the proposed project has been constructed, urban runoff could include a variety of contaminants that are typical of the operation of school athletic facilities. As discussed in Impact 8.4(a), above, the proposed project would be required to comply with applicable federal and state laws and regulations governing the use, storage, transport, and disposal of hazardous materials would ensure impacts would be less than significant.

Furthermore, the proposed project would implement operational BMPs to control the amount and quality of the stormwater leaving the project site, such as employee training, sweeping parking lots, and providing storm drain system stenciling and signage. Therefore, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. The City of Riverside Public Utilities (RPU) supplies water to the City, including the campus. The RPU's primary source of water is local groundwater which it extracts from five groundwater basins: Bunker Hill, Rialto-Colton, Riverside North, Riverside South, and Arlington Basins (RPU 2021). The campus does not contain any wells or direct groundwater connections, and the proposed project would not increase student enrollment. The proposed field house would result in an increase in water use during events and games. Although water would be consumed in conjunction with landscape and facility maintenance on a regular basis, these volumes would be substantially less than generated during an event. The proposed project's use of artificial turf would further reduce the volume of water used for maintenance because regular watering of the field would not be required. Since the proposed project would not increase in water consumption because these activities currently occur. Therefore, the increases in water consumption from the proposed project would be nominal and would not result in a need to increase pumping of groundwater resources. Based on RPU's 2020 Urban Water Management Plan (UWMP), RPU identified that

water supplies would exceed demands in its service area in normal, single-dry year, and multiple-dry-year conditions through 2045 (RRU 2021). Therefore, impacts would be less than significant.

c) 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 a substantial erosion or siltation on- or off-site?

Less Than Significant Impact. Erosion and siltation impacts that could result from alteration of drainage patterns would, for the most part, occur during the proposed project's construction phase, which would include site preparation and grading activities. Environmental factors that affect erosion include topography, soil type, wind, and rainfall. Siltation is associated with sediment transport and deposition in waterways. The proposed project would not involve the alteration of any natural drainage channels or any watercourse. The proposed project would result in a minor increase of impervious surfaces on the project site, and the majority of the project site would remain in its current state.

The proposed project's earthwork activities may include grading and utilities trenching. If not controlled, the transport of these materials to local waterways would temporarily increase suspended sediment concentrations and release pollutants attached to sediment particles into local waterways. As discussed in Impact 8.5(a), the proposed project would be required to submit PRDs and a SWPPP to the SWRCB for approval prior to the commencement of construction activities. The SWPPP would describe BMPs to reduce erosion and siltation. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. The project site is built-out with hardscape, track and field, baseball field, tennis courts, and associated structures. Furthermore, the proposed project would not involve the alteration of any natural drainage or watercourse. As discussed above, the proposed project would result in a minor increase of impervious surfaces on the project site, and the majority of the project site would remain in its current state. Therefore, the amount of stormwater runoff would be similar to existing conditions. The proposed project would not substantially increase the rate or amount of surface runoff in a manner that would cause flooding on or off site. Therefore, impacts related to stormwater drainage and flooding would be less than significant.

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?

Less Than Significant Impact. The proposed project would not substantially increase the amount of impervious surfaces. The majority of the project site would remain in its current state. Therefore, the proposed project would generate stormwater similar to existing conditions. Stormwater that does not percolate into the ground would be directed to storm drains on campus and to surrounding storm drains in the public right-of-way. As discussed above, construction and operation of the proposed project would

be required to implement BMPs that would control the amount and quality of stormwater exiting the project site. The proposed project would not exceed the capacity of existing stormwater drainage systems and would not create substantial additional sources of polluted runoff. Impacts would be less than significant.

iv) Impede or redirect flood flows?

Less Than Significant Impact. The proposed project would not substantially alter the existing drainage pattern of the project site or result in a substantial increase in impervious surfaces. According to FEMA's Flood Map Service, the campus is within FEMA Flood Zone X, which is an area of minimal flood hazard (FEMA 2024). Therefore, it is unlikely that flooding would occur on-site. Similar to existing conditions, the proposed project would include construction and operation of athletic facilities and a parking lot on-site. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. The California Office of Emergency Services' (OES) Dam Inundation Map identifies the campus and surrounding communities as within the low potential inundation area of Mockingbird Canyon Dam (OES 2024). Mockingbird Canyon Dam is approximately 3.6 miles southeast of the campus. The project site would be developed with athletic facilities and a parking lot, similar to existing conditions. In addition, any potential impacts of inundation related to the Mockingbird Canyon Dam would be the same as existing conditions. As discussed in Impact 8.5(c.iv), the proposed project would not be subject to flooding.

A seiche is an oscillating surface wave in a restricted or enclosed body of water, generated by ground motion, usually during an earthquake. There is no large water body in the vicinity of the campus that would pose a flood hazard to the school due to a seiche. The most likely areas that could be subject to seiche in the City of Riverside are areas near Lake Mathews approximately 4.1 miles southeast of the campus. Considering the distance, varying topography, and surrounding land uses between the campus and Lake Mathews, impacts would be less than significant.

Tsunamis are a type of earthquake-induced flooding produced by large-scale sudden disturbances of the sea floor. Tsunami waves interact with the shallow sea floor when approaching a landmass, resulting in an increase in wave height and a destructive wave surge into low-lying coastal areas. The campus is over 30 miles east of the Pacific Ocean. Therefore, the campus is outside the tsunami hazard zone and would not be affected by a tsunami. Therefore, the proposed project would not release pollutants as the result of floods, tsunamis, or seiches. Impacts would be less than significant.

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

Less Than Significant Impact. The quality of surface and groundwater is affected by land uses in the watershed and the composition of subsurface geologic materials. Water quality in surface and groundwater bodies is regulated by the SWRCB and Regional Water Quality Control Board. The proposed project would

not conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan. Project construction would be subject to the statewide CGP and implementation of BMPs specified in the SWPPP. This would minimize the potential for erosion or siltation impacts to occur that could impact receiving waters. The project site is not a substantial groundwater recharge area and implementation of the proposed project would not result in substantial increases in water demands that would require extraction of additional groundwater. Therefore, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

8.6 LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. Typically, new land use barriers, such as highways, divide or disrupt the physical arrangement communities. The project site and surrounding area are fully developed with urban land uses. The proposed project would occur within the boundaries of the La Sierra HS campus. No impact would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed project is consistent with the existing school and athletic uses at the campus, which is zoned Single Family Residential (R-1-7000) and has a land use designation of Public Facilities/Institutions (PF). As the project site currently contains athletic uses, the proposed project would not change the use of the project site. Project development would not require modification to the site's current General Plan land use and zoning designations. Development of the proposed project would not conflict with any applicable land use plans, policies or regulations. Therefore, there would be no impact.

8.7 MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. Based on California Geological Information Warehouse: Mineral Land Classification Maps, the project site is within Mineral Resource Zone 3 (MRZ-3) (DOC 2014). MRZ-3 are areas of undetermined mineral resource significance; therefore, there is no known mineral resource of value (CGS 2017). Additionally, the project site is within an existing high school and would continue to operate as such; no mineral resources would be extracted. Therefore, the proposed project would not result in the loss of a known mineral resources valuable to the region, and no impact would occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. Based on California Geological Information Warehouse: Mineral Land Classification Maps, the project site is within an MRZ-3, and area with no known mineral resources (DOC 2014). Additionally, the Riverside General Plan Figure OS-1, Mineral Resources, does not identify locally important mineral resource recovery sites within the vicinity of campus. The project site is within a high school and no mineral resources would be extracted. No impact would occur.

8.8 POPULATION AND HOUSING

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project would be constructed within the existing campus. The proposed project would serve the existing needs of the campus and would not increase student enrollment, student capacity, or the number of staff onsite. The proposed project would not create new construction employment opportunities that could result in a greater demand for local housing. Additionally, the proposed project would continue to utilize the existing roads and infrastructure. Therefore, project development would not induce population growth in the area, either directly or indirectly. Thus, no impact would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would be constructed within the existing La Sierra HS campus. No housing exists on campus, and no relocation or construction of replacement housing would occur. Therefore, no impact would occur.

8.9 PUBLIC SERVICES

Would the project 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?

Less Than Significant Impact. The City of Riverside Fire Department (RFD) would provide fire protection and emergency services to the project site. RFD provides fire protection, emergency services, hazardous materials program, technical rescue, fire investigations, and public education outreach (RFD 2017). La Sierra Riverside Station 8, at 11076 Hole Avenue, is approximately 0.70 mile north of the project site. Other stations, including Station 12 approximately 0.9 mile south of the campus, may also respond to calls

from the campus and/or support fire protection needs at the campus. Construction of the proposed project would be required to comply with all applicable regulations regarding building code, hazardous material handling, and fire protection. Construction plans would be reviewed by the RFD and DSA to ensure adequate emergency access. Additionally, construction activities would be temporary.

The proposed project would extend usable hours of the existing track and field by installing lighting. The proposed project would not increase student enrollment or school capacity. However, the proposed project would provide bleachers that would accommodate 2,800 spectators. The increase in spectator capacity and events would generate more people and activities on the project site, which may create an increase in demand for fire protection services compared to existing conditions. The existing access and circulation features at La Sierra HS, include the on-site roadways, parking lots, and fire lanes, which would continue to accommodate emergency services. The proposed project would be designed to accommodate emergency access to the facility in accordance with the fire code and would be reviewed by the DSA and RFD. Emergency vehicles have access to the project site and all other areas of the school via on-site travel corridors consistent with existing conditions. Therefore, the proposed project would not affect emergency access to the project site. Sporting events and activities onsite would be monitored and supervised by District staff or other authorized supervisor. Although the proposed project may create an increase in the demand for fire protection services compared to existing conditions, such increases would be negligible as sporting events that currently take place on other campus would occur onsite. Therefore, the proposed project would not generate an increase in fire protection facilities nor personnel in manner that would require new or physically altered fire protection facilities. The proposed project would have a less than significant impact on fire protection services.

b) Police protection?

Less Than Significant Impact. Riverside Police Department (RPD) would serve the project site. RPD provides police services to the project site from the Magnolia Station at 10540 Magnolia Avenue, approximately 0.80 mile east of the project site.

The proposed project would extend usable hours of the existing track and field by installing lighting. The proposed project would not increase student enrollment or school capacity. However, the proposed project would provide bleachers that would accommodate 2,800 spectators. The increase in spectator capacity and events would generate more people and activities on the project site, which may create an increase in demand for police protection services compared to existing conditions.

Sporting events and activities onsite would be monitored and supervised by District staff or other authorized supervisor, which would deter unwanted activities. Further as discussed in Threshold 8.9(a) above, the proposed project would maintain existing circulation and access points on the campus and project site. Although the proposed project may create a slight increase in the demand for police protection services compared to existing conditions, such increases would be negligible as sporting events that currently take place at other campuses would occur onsite. Therefore, the proposed project would not generate an increase in police protection services in a manner that would require new or physically altered police protection facilities. The proposed project would have a less than significant impact on police protection services.

c) Schools?

No Impact. The proposed project would improve the athletic facilities and parking lot onsite. Demand for schools is largely generated by new housing developments. The proposed project would serve existing students and would not generate an increase in student capacity or enrollment. Therefore, no impacts to schools would occur.

d) Parks?

No Impact. Typically, the demand for parks is created by the development of new housing and/or actions that generate additional population. The proposed project would serve the existing student population and would not induce population growth or housing in the area. The proposed project would not increase the use of existing parks or recreational facilities, or the need for new parks or recreational facilities. The Riverside General Plan states the City has a joint-use agreement with the District to share facilities which includes ball fields, tennis courts, swimming pools and sports complexes (Riverside 2012). Moreover, the proposed project would be made available for community-sponsored events after school hours in accordance with the Civic Center Act (Education Code Sections 38130–38139) and District policy, thereby providing improved recreational opportunities to the community and reducing impacts on neighborhood parks. No impacts to parks would result from the proposed project.

e) Other public facilities?

Less Than Significant Impact. The proposed project would be served by the existing infrastructure. Due to the size and general nature of the proposed project, impacts to public facilities are not anticipated to be significant. The District would be responsible for required utility connections and any applicable improvements necessary to accommodate the proposed project. Development of the proposed project would not require new or altered governmental services for the maintenance of roadways or other public facilities. The nearest public library branch is the La Sierra Library approximately 0.50 miles north of the campus. The proposed project would not generate any additional demand for facilities nor require new or physically altered facilities, such as libraries. Impacts would be less than significant.

8.10 RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. As discussed under Impact 8.9(d), the demand for recreational facilities is created by the development of new housing and/or actions that generate additional population. The proposed project would serve an existing student population and would not increase student enrollment/capacity. Therefore, the proposed project would not cause population growth. Since the proposed project would not include growth, no substantial increases in the use of existing parks or recreational facilities off-campus would occur. The Riverside General Plan states the City has a joint-use agreement with the District to share facilities which

includes ball fields, tennis courts, swimming pools, and sports complexes (Riverside 2012). Moreover, the proposed project would be made available for community-sponsored events after school hours in accordance with the Civic Center Act (Education Code Sections 38130–38139) and District policy, thereby providing improved recreational opportunities to the community and reducing impacts on neighborhood parks. Therefore, no impacts would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. As discussed under Impact 8.10(a), the proposed project would serve the La Sierra HS's existing student population and would not increase the school's enrollment/capacity. Therefore, the proposed project would not induce growth and no increases in the use of any existing facilities would occur. The proposed project would not require the construction or expansion of recreational facilities off-campus. No impacts would occur.

8.11 UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact.

Water

The proposed project includes construction of a field house, which would require the installation of a waterline connection to serve the new building. Water is currently provided to the campus by RPU's existing water mains. Potable water would be provided to the new uses through connections to the existing water mains. The proposed water lines would be designed and constructed in accordance with the CBC and CALGreen requirements, such as CALGreen Division 5.3, Water Efficiency and Conservation, including those of Sections 5.303, Indoor Water Use, and 5.304, Outdoor Water Use. According to RPU's 2020 UWMP, RPU would have surplus water supplies to serve the City and its growth through 2045 (RPU 2021). Based on a seating capacity of 2,800 spectators, the bleachers have the potential to result in the consumption of approximately 12,320 gallons of potable water per day during a capacity event.¹ The UWMP states that there would be a surplus in water supply of 24,211 acre-feet or 7.88 million gallons² in 2025; therefore, the proposed project would consume less than 1 percent³ of the projected water supply surplus. The proposed

Generation rate for a school stadium is 4 gallons/day/seat (City of Los Angeles, LA CEQA Thresholds Guide, 2006); consumption rate is assumed to be 4.4 gallons/day/seat (110 percent generation rate).
 2,800 seats x 4.4 gallons/day/seat = 12,320 gallons/day.

² 1 AF = 325,851 gallons

^{24,211} x 325, 851 = 7.88 million gallons

³ 12,320 gallons \div 7.88 million gallons x 100 = 0.156 %

project would not require the construction of new or expanded water facilities that could cause significant effects. Impacts would be less than significant.

Wastewater

The proposed project includes the construction of a field house which would require the installation of wastewater connections. The City's Public Works Department manages wastewater operations and programs. Wastewater generated in the City, including the campus, is treated at the Riverside Regional Water Quality Control Plant (RWQCP) (Riverside 2024b). According to the City of Riverside Sewer System Management Plan, the RWQCP has a capacity of 46 million gallons per day (mgd) (Riverside 2022). Based on a seating capacity of 2,800 spectators, the proposed project is estimated to generate 11,200 gallons per day (ggd)⁴ of wastewater. This increase would make up less than 1 percent of the RWQCP's daily capacity.⁵ Therefore, the proposed project would not require the construction of new or expanded wastewater facilities that could cause significant environmental effects. Impacts would be less than significant.

Stormwater Drainage

The proposed project would result in a slight increase in impervious surfaces compared to existing conditions. The increase in impervious surfaces due to the proposed project would be negligible and the majority of the project site would remain in its current state (e.g. the track, field, baseball field, tennis courts, etc.). The stormwater from the proposed project would be conveyed to existing stormwater drains on campus or to storm drain systems along the surrounding roadways. The proposed project would not significantly increase or change the stormwater volume, rate, or pattern, beyond connecting to existing stormwater system. As such, the proposed project would not require the construction of new or expanded stormwater facilities that could cause significant environmental effects. Impacts would be less than significant.

Electricity

Electricity is provided by Southern California Edison. The proposed project would connect to existing electric power infrastructure for operation. Although the proposed project would result in a higher electricity demand than existing conditions, the increase would be negligible. Development of the new structures would be required to comply with energy efficiency standards set forth by Title 24, and other applicable federal, state, and local regulations. As such, the proposed project would not result in the relocation or construction of new or expanded electricity infrastructure that would cause significant impacts. Impacts would be less than significant.

Natural Gas

Natural gas service is provided by the Southern California Gas Company to the area. The field house would not utilize natural gas, and would be an all-electric facility. Therefore, no impact would occur.

⁴ 2,800 seats x 4 gallons/day/seat = 11,200 gallons/day

⁵ 11,200 gallons / 46,000,000 gallons x 100 = 0.024%

Telecommunications

The proposed project would not require changes to the telecommunications facilities demand. The proposed project would not require off-site construction or relocation of utilities, and therefore no impacts would occur.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact. The City of Riverside's UWMP indicates that water supplies would exceed demands through 2045 during normal, dry, and multiple dry years (RPU 2021).

The field house of the proposed project would require water use and installation of a water line connection to serve the new buildings. As discussed in Impact 8.11(a), the proposed project would consume less than 1 percent of RPU's projected surplus water supply.

The proposed project's water demand would be captured by the projected demand of the UWMP. Furthermore, development of the proposed project would be required to comply with the provisions of CALGreen Division 5.3, Water Efficiency and Conservation, including those of Sections 5.303, Indoor Water Use, and 5.304, Outdoor Water Use. The RPU has adequate water supplies to meet the water demands of the proposed project and the City during normal, dry and multiple dry years. Impacts would be less than significant.

c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. Wastewater generated at the campus is conveyed to the RWQCP. According to the City of Riverside Sewer System Management Plan, RWQCP has a capacity to treat 46 mgd (Riverside 2022). The field house of the proposed project would generate wastewater and require installation of a wastewater line connection to serve the new building. As discussed in Impact 8.11(a), the project site would continue to operate as an educational campus and increases in wastewater generation due to the proposed field house (including associated events) would be negligible considering the existing treatment capacity of RWQCP; the proposed wastewater generation would make up less than 1 percent of RWQCP's capacity. The proposed project's increase in wastewater generation would be low compared to existing conditions as the campus' enrollment capacity would remain unchanged and the increased water demand would only occur during events/games, which are intermittent. The proposed project would not require construction of new or expanded wastewater treatment facilities. Impacts would be less than significant.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. During construction, the proposed project would generate some demolition debris from clearance and waste debris. Construction solid waste generation would be minimal, since the proposed project would not demolish buildings. Additionally, the proposed project would comply with

CALGreen Section 5.408, Construction Waste Reduction, Disposal, and Recycling, which requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

The proposed project would not increase student enrollment, but additional sports games and an increase in spectators on-site would result in an increase of solid waste generated by the proposed project's operational activities, thereby increasing the amount of solid waste generated by the La Sierra HS campus. Solid waste generated at the campus would be disposed of at the El Sobrante Landfill. The landfill has a permitted maximum disposal of 16,054 tons per day and a remaining capacity of approximately 143 million cubic tons (CalRecycle 2024). Although the proposed project is expected to result in an increase of solid waste generated at the project site, such games are currently held at other schools within the City and would be relocated to La Sierra HS. Therefore, the net increase in solid waste to the El Sobrante Landfill or other area landfills resulting from the proposed project would be marginal. As the El Sobrante Landfill has a remaining capacity of approximately 143 million cubic yards, it would not be significantly affected by marginal increases in solid waste that may occur as a result of the proposed project. The proposed project would not adversely impact landfill capacity or impair attainment of solid waste reduction goals, and impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. All local governments, including the City of Riverside, are required under Assembly Bill 939 (AB 939), the Integrated Waste Management Act of 1989, to develop source reduction, reuse, recycling, and composting programs to reduce tonnage of solid waste going to landfills. The District currently complies with federal, state, and local statutes and regulations related to solid waste, such as the California Integrated Waste Management Act and local recycling and waste programs. The District and its construction contractor would comply with all applicable laws and regulations and make every effort to reuse and/or recycle the construction debris that would otherwise be taken to a landfill. CALGreen Section 5.408, Construction Waste Reduction, Disposal, and Recycling, requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. The proposed project would comply with all applicable federal, state, and local statutes and regulations related to solid waste disposal. Therefore, the impacts would be less than significant.

8.12 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The campus is in an urbanized area surrounded by development, and is not within a very high fire hazard severity zone (FHSZ) (CAL FIRE 2023). The nearest very high FHSZ is approximately 1.3 miles west of the campus. In the event of an emergency, the City of Riverside utilizes the Riverside emergency operations plan, which provides guidance to both prepare and respond to emergencies

and disasters (Riverside 2020). Evacuation would be carried out by the RFD in the case of an emergency or disasters (Riverside 2021).

Emergency evacuation routes are outlined in Figure CP-8, Evacuation Routes, of the General Plan, which identify La Sierra Avenue and Magnolia Avenue as evacuation routes. Because the proposed project would occur within the La Sierra HS boundaries, the proposed project would not impair emergency evacuation routes. The proposed project would be designed in accordance with the CBC and CFC. Additionally, project design plans would be reviewed by the DSA and RFD. Therefore, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant Impact. The project site and surroundings are relatively flat, and the proposed project would not result in uses that would exacerbate fire risks. Additionally, as the campus is in an urbanized area surrounded by development, and is not within a very high FHSZ, the proposed project would not expose people to pollutant concentrations or uncontrolled wildfire spread. Therefore, impacts would be less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less Than Significant Impact. The campus is in an urban area and is served by existing utility infrastructure, including water and power. Development of the proposed project would require new utility hook-ups to the existing utilities that serve the campus for the proposed uses. All utilities lines would be installed to meet service provider requirements. The proposed project would be designed and constructed in accordance with the CBC and the CFC. As the campus is not within a very high FHSZ, the proposed project would not exacerbate fire risks. Therefore, the proposed project would not include the installation or maintenance of infrastructure that could exacerbate fire risk or result in temporary or ongoing impacts to the environment. Impacts would be less than significant.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. As indicated in Impact 8.5c(iv) and Impact 8.3a(iv), the campus is not within a flood zone or susceptible to landslides. Although, the project site is within a low potential dam inundation zone, the proposed project would not increase the existing hazard on campus as the school currently exists. Based on the topography of the campus, its distance from the dam, and its location outside of a flood zone and very high FHSZ, the proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be less than significant.

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9. Significant Irreversible Changes Due to the Proposed Project

The CEQA Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Specifically, Section 15126.2(c) of the CEQA Guidelines states:

Uses of nonrenewable resources during the initial and continued phases of the Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highways improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The following significant irreversible changes would be caused by implementation of the proposed project:

- The proposed project would include construction activities that would require the commitment of nonrenewable and/or slowly renewable energy resources, human resources, and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels. The proposed project would also require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. However, the proposed project does not represent an uncommon construction project that uses an extraordinary amount of raw materials in comparison to other urban development projects of a similar scope and magnitude.
- Operation of the proposed project would require continued use of electricity, petroleum-based fuels, fossil fuels, and water, similar to existing school operations. Operation of the proposed project would also require a continued commitment of social services and public maintenance services (e.g., police, fire, electricity, etc.).

The commitment of resources required for the construction and operation of the proposed project would limit the availability of such resources for future generations or for other uses during the life of the proposed project.

9. Significant Irreversible Changes Due to the Proposed Project

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10. Growth-Inducing Impacts of the Proposed Project

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?

The proposed project would renovate the existing track and field facilities to support athletic programs at the La Sierra High School. The proposed project would not increase student enrollment and would relocate sporting activities taking place off-campus at neighboring schools to the project site. The project site is in an urbanized area served by existing infrastructure, including water and sewer mains and electricity and natural gas services. The proposed project would require connection to the existing wet and dry infrastructure in the vicinity of the project site. Such improvements would only affect the project site. The proposed project would not result in major land use development that requires changes to existing regulations pertaining to land development and would not remove obstacles to growth or affect population growth.

10. Growth-Inducing Impacts of the Proposed Project

Would this project result in the need to expand one or more public services to maintain desired levels of service?

The proposed project would enhance athletic facilities at the project site and would not result in an increase in student enrollment or capacity. The proposed project would result in an increase in spectators and events onsite; however, such increases would not be significant because the same sporting events currently take place at other campuses. The proposed project would not generate an increase in public services that would require new or expanded public services or utility infrastructure. See Chapter 8, *Impacts Not Found to Be Significant*, of this DEIR.

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

Construction of the proposed project would generate short-term employment that would be absorbed by the regional labor force, so it would not attract new workers to the region. The proposed project would not result in an increase in student enrollment, capacity, or school employment. The proposed project would serve the existing athletic-related needs of the students attending La Sierra High School. The proposed project is not anticipated to encourage or facilitate economic effects that could result in other activities that could significantly affect the environment.

Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

The proposed project would support and enhance athletic programs at the La Sierra High School campus. District approval would not set a precedent that could encourage and facilitate local and regional activities and government actions that could significantly affect the environment. School construction activities to enhance educational and athletic programs are common state- and nationwide.

11. Qualifications of Persons Preparing EIR

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