January 2021 | Draft Environmental Impact Report
State Clearinghouse No. 2020029071

CRESCENTA VALLEY HIGH SCHOOL FIELD IMPROVEMENT PROJECT

for Glendale 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

Abbreviations and Acronyms

CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CVWD	Crescenta Valley Water District
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
GUSD	Glendale Unified School District
HCM	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

Abbreviations and Acronyms

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
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
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

Abbreviations and Acronyms

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
TTCP	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. Executive Summary

1.1 INTRODUCTION

This draft environmental impact report (DEIR) addresses the environmental effects associated with the implementation of the proposed Crescenta Valley High School Field Improvement Project (the 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 document focuses on impacts determined to be potentially significant in the Initial Study completed for this project (see Appendix A).

This DEIR has been prepared pursuant to the requirements of CEQA and the Glendale Unified School District's (GUSD or District) CEQA procedures. The 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 technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR derive 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, energy, geological resources, hazards and hazardous materials, hydrology and water quality, noise, transportation, 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.

1. Executive Summary

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 DEIR 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 DEIR, 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 DEIR.

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 DEIR.

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. Organizations and Persons Consulted: Lists the people and organizations that were contacted during the preparation of this DEIR.

Chapter 12. Qualifications of Persons Preparing EIR: Lists the people who prepared this DEIR for the proposed project.

Chapter 13. Bibliography: The technical reports and other sources used to prepare this DEIR.

Appendices: The appendices for this document (in PDF format on a CD attached to the front cover) comprise these supporting documents:

- Appendix A: Initial Study/Notice of Preparation (NOP)
- Appendix B: Lighting Report
- Appendix C: Air Quality/GHG Modeling Data
- Appendix D: Noise Data
- Appendix E: Public Service Correspondence
- Appendix F: Traffic Study

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

Crescenta Valley HS is located at 2900 Community Avenue (Assessor's Parcel Map Numbers 5801-016-903 and 5801-016-904) in the southwest part of the unincorporated community of La Crescenta, Los Angeles County, California (Figure 3-1, *Regional Location*). The Crescenta Valley High School Field Improvement project (proposed project) would be developed within the existing field. Specifically, the project would result in new construction that would impact approximately 4.37 acres of the existing field and track, the existing temporary bleachers, the handball courts, the tennis courts, and an existing storage facility at the southern edge of the

campus. The proposed project would not impact other areas of the campus. The 4.37 acres will be referred to as the "project site" and/or "track and field."

The Crescenta Valley HS campus is trapezoidal and bordered by Community Avenue to the north, I-210 to the south, Glenwood Avenue to the east, and Ramsdell Avenue to west (Figure 3-2, *Local Vicinity* and Figure 3-3, *Aerial Photograph*). The project site is bounded by existing Crescenta Valley HS tennis and basketball courts to the north, with single-family residential uses located further north across Prospect Avenue, Interstate 210 (I-210) to the south, single-family uses to the west across Ramsdell Avenue, and single-family uses to the east. La Crescenta Elementary School is located approximately 250 feet to the northeast of the proposed project site. The community of La Crescenta is an unincorporated area of Los Angeles County that is surrounded by the cities of Glendale to the south and west, La Cañada Flintridge and unincorporated Montrose to the east, and the Angeles National Forest to the north. Regional access to the Crescenta Valley HS campus is I-210, approximately 0.1 mile to the south.

1.4 PROJECT SUMMARY

The proposed project would redevelop the area north of the existing track and field and south of the tennis courts to install permanent bleachers and new field lighting for the existing track and field. Additional improvements would include a restroom and storage/maintenance buildings, a team room, and a concession stand. The proposed project includes the development of new bleachers with 3,442 seats. All 3,442 seats would be along the northeastern portion of the existing field. The bleachers would be aluminum and galvanized steel construction with concrete foundations. In addition, the project would include the installation and operation of four 100-foot-tall light poles along the perimeter of the running track. The project would also include a 540-square-foot concession stand along the northern perimeter of the project site and a 2,254-square-foot home team room along the southeastern perimeter of the project site. The proposed project would make use of existing street and on-site parking, as well as utilizing available parking at the La Crescenta Elementary School campus. No change in site access or parking would occur. The school's use of the proposed field would be from 7:00 am to 10:00 pm Monday through Friday, and 8:00 am to 10:00 pm on Saturday. Table 1-1, *Proposed Athletic Field Improvements*, provides details for each component of the proposed project.

Table 1-1 Proposed Athletic Field Improvements

Component	Description
Main Bleachers	3,442 seating capacity 43 feet high 58 feet wide 248 feet long 200-square-foot press box 14,500 total square footage
Concession Stand	540 total square footage 3 sinks 4 service windows
Storage Room	1,300 total square footage
Restrooms	1,860 total square footage
Home Team Room	2,254 total square footage

Table 1-1 Proposed Athletic Field Improvements

Component	Description
Scoreboard	10 feet high 32 feet wide
Field Lighting (4)	100 feet tall 12 fixtures per pole 26-inch x 21-inch 1,430W LED lighting fixtures 2 poles would include a public address (PA) system

1.5 SUMMARY OF PROJECT ALTERNATIVES

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to a project that could feasibly attain the basic objectives of a project and avoid or lessen the environmental effects of a project. While the City considered various options and recommendations during the scoping process, the final selection of alternatives was based on the CEQA Guidelines Section 15126.6[f], which states that the selection of alternative shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.

Based on the criteria listed in Section 7.1.1, 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 may avoid or substantially lessen any of the significant effects of the project. These alternatives are analyzed in detail in the following sections.

- No Project/Existing General Plan Alternative
- Bleacher and Field Improvements with No Lighting Alternative

1.6 NO-PROJECT/EXISTING GENERAL PLAN ALTERNATIVE

1.6.1 No Project Alternative

CEQA Guidelines Section 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 proposed permanent bleachers with 3,442 seats, 100-foot light poles, 540-square-foot concession stand, 2,254-square-foot home team room, restroom and storage/maintenance building would not be constructed. The existing field would continue to be used only during the daytime, and Crescenta Valley HS students would continue to travel to other facilities in the District for some practices and games. This alternative would not meet any of the project objectives.

1.6.2 Bleacher and Field Improvements With No Lights

This alternative would provide a track and field with bleachers as depicted in the proposed project, with no nighttime lighting. This alternative would eliminate aesthetic impacts from the 100-foot lights. No nighttime practices or games would occur under this alternative, and hours of use would be limited to daylight hours only.

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 areas of controversy include issues related to aesthetics, especially the spill light and glare impacts from 100-foot nighttime lighting, noise from field use, and traffic congestion and parking issues from practices and events. Comments received during circulation of the NOP/IS are included in Appendix A.

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

Table 1-2 summarizes the conclusions of the environmental analysis contained in this DEIR. 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.

Table 1-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AESTHETICS			
Impact 5.1-1: The proposed project would have a substantial adverse effect on a scenic vista.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.1-2: Operation of the proposed project would generate new source of substantial light or glare which would adversely affect nighttime views in the area	Potentially Significant	AE-1 The Glendale Unified School District shall minimize the effects of new sources of nighttime lighting by incorporating the following measures into project design and operation: • All lighting shall be shielded and directed downward onto the athletic fields to minimize potential light escape and/or spillover onto adjacent properties. • The new athletic field lights shall be shall shut off automatically at 10:00 p.m.	Significant and Unavoidable
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.2 AIR QUALITY			
Impact 5.2-1: The proposed project is consistent with the applicable air quality management plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.2-2: Construction activities associated with the proposed project would generate short-term emissions in exceedance of South Coast AQMD's threshold criteria.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.2-3: Long-term operation of the project would not generate emissions in exceedance of South Coast AQMD's threshold criteria.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.2-4: Construction activities associated with the proposed project would expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant	No mitigation measures are required.	Less Than Significant

1. Executive Summary

Table 1-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.2-5: Operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impact	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.3 ENERGY			
Impact 5.3-1: Construction activities would not result in wasteful, inefficient, or unnecessary consumption of energy or have excessive energy requirements.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.3-2: Operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.4 GEOLOGY AND SOILS			
Impact 5.4-1: Project occupants and visitors would be subject to potential strong seismic ground shaking	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.4-2: Unstable geologic unit or soils conditions, including soil erosion, could result from development of the project.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.5 GREENHOUSE GAS EMISSIONS			
Impact 5.5-1: Implementation of the proposed project would generate a net increase in GHG emissions, either directly or indirectly, that would have a significant impact on the environment.	Less Than Significant	No mitigation measures are required.	Less Than Significant

Table 1-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.5-2: Implementation of the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.6 HAZARDS AND HAZARDOUS MATERIALS			
Impact 5.6-1: Project development could affect the implementation of an emergency responder or evacuation plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.6-2: The project site is in a designated fire hazard zone and could expose structures and/or residences to fire danger.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.7 HYDROLOGY AND WATER QUALITY			
Impact 5.7-1: The proposed project would violate any water quality standards or waste discharge requirements.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.7-2: The proposed project would 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	No mitigation measures are required.	Less Than Significant
Impact 5.7-3: 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 result in a substantial erosion or siltation on- or off-site.	Less Than Significant	No mitigation measures are required.	Less Than Significant

1. Executive Summary

Table 1-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.7-4: 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.8 NOISE			
Impact 5.8-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project.	Potentially Significant	N-1 As required by the County of Los Angeles Municipal Code, construction activities shall take place only between the hours of 7:00 AM and 7:00 PM on weekdays and Saturdays, and not on Sundays or a national holiday. In addition, the following practices shall be observed and implemented: • Erect a temporary noise barrier/curtain along the eastern and northern construction site boundaries (see Figure 5.8-3, *Proposed Temporary Noise Barrier)*. The temporary sound barrier shall have a minimum height of 12 feet and be free of gaps and holes. The barrier can be (a) a ¾-inch-thick plywood wall OR (b) a hanging blanket/curtain with a surface density or at least 2 pounds per square foot. • Limit noise-producing signals, including horns, whistles, alarms, and bells, to safety warning purposes only; • Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment; • Unnecessary idling of internal combustion engines should be strictly prohibited; • Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors;	Less Than Significant

Table 1-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Utilize "quiet" air compressors and other stationary noise sources where technology exists; • Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction; • Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.	
Impact 5.8-2: Project implementation would result in periodic operation-related noise that would substantially increase ambient noise levels.	Potentially Significant	N-2 Prior to holding the first spectator event, the District shall develop a Noise Control Plan. 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. In addition, the following measures shall be implemented: • The District shall retain a qualified acoustical consultant during final design of the PA system. The consultant shall prepare a report detailing recommended measures to minimize special event and game noise to the degree feasible. Such measures may include, but are not limited to, construction of a sound wall along the property line to the east and/or relocation of the speakers/poles closer to the bleachers, thereby maximizing the distance between the speakers and nearby residences. • During subsequent design phases of the bleachers and PA system, the District's sound system contractor shall create a Track and field Sound System Design Plan. The project's sound system design goal should be to optimize conveying information to the event attendees while minimizing off-site spill-over effects. • Prior to the first sports field event, the public address system contractor shall perform a system check-out to verify appropriate sound levels in	Significant and Unavoidable

Table 1-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		the seating areas, as well as minimized spill-over sound levels into the adjacent community areas.	
Impact 5.8-3: The project would not create short-term or long-term groundborne vibration and groundborne noise.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.9 PUBLIC SERVICES			
Impact 5.9-1: The proposed project would introduce new structures into the LACFD's service boundaries, thereby increasing the requirement for fire protection facilities and personnel.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.9-2: The proposed project would introduce new structures into the LASD's service boundaries, thereby increasing the requirement for police protection facilities and personnel.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.10 TRANSPORTATION			
Impact 5.10-1: The proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Potentially Significant	• No mitigation measures are required.	Less Than Significant
Impact 5.10-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.10-3: Project circulation improvements have been designed to adequately address potentially hazardous	Less Than Significant	No mitigation measures are required.	Less Than Significant

Table 1-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
conditions (sharp curves, etc), potential conflicting uses, and emergency access.			
Impact 5.10-4: The proposed project would result in inadequate parking capacity.	Potentially Significant	T-1 Prior to any ground disturbing activities, the District shall prepare an event traffic control plan. The plan shall be implemented during major sporting events held at CVHS (e.g., where near-full or full capacity is anticipated, such as at varsity or championship football games). The plan shall require that, immediately prior to each major sporting event, documentation of all available off-street parking supplies and temporary signage be placed at appropriate, pre-determined locations along local streets in the vicinity of available event parking areas. The plan shall also determine additional parking spaces at nearby vacant or underutilized parking lots and require that District school safety traffic control personnel be available to direct event traffic to and from available designated parking areas. The traffic officers shall be stationed at the intersections to help improve traffic flow and ensure public safety during peak travel times to and from major sporting events held at CVHS. All temporary directional signage shall be removed by traffic control personnel following each major stadium event.	Significant and Unavoidable
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.11 WILDFIRE			
Impact 5.11-1: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Cumulative Impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant

1. Executive Summary

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2. Introduction

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" (Guidelines § 21067). The Glendale Unified School District (GUSD) has the principal responsibility for approval of the Crescenta Valley High School Field Improvement Project. For this reason, GUSD 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 Crescenta Valley High School Field Improvement Project (proposed project) to allow GUSD 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 AND INITIAL STUDY

GUSD determined that an EIR would be required for this project and issued a Notice of Preparation (NOP) and Initial Study on February 20, 2020 (see Appendix A). Comments received during the initial study's public review period, from February 20 to March 20, 2020, are in Appendix A.

The NOP process helps determine the scope of the environmental issues to be addressed in the DEIR. Based on this process and the initial study for the project, certain environmental categories were identified as having the potential to result in significant impacts. Issues considered Potentially Significant are addressed in this DEIR, but issues identified as Less Than Significant or No Impact are not. Refer to the initial study in Appendix A for discussion of how these initial determinations were made.

2.3 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on the District's initial study, comments received in response to the NOP, and comments received at the scoping 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 as more detailed information and plans are submitted on a project-by-project basis.

2.3.1 Impacts Considered Less Than Significant

During preparation of the Initial Study, GUSD determined that nine environmental impact categories would not be significantly affected by the proposed Crescenta Valley High School Field Improvement Project. Analysis of these categories can be found in Appendix A of this DEIR.

- Agriculture and Forestry Resources
- Biological Resources
- Cultural Resources
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Recreation
- Tribal Cultural Resources
- Utilities and Service Systems

2.3.2 Potentially Significant Adverse Impacts

GUSD determined that 11 environmental factors have potentially significant impacts if the proposed project is implemented, and these topics are discussed in their respective chapters of this DEIR.

- Aesthetics
- Air Quality
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation
- Wildfire

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:

- Aesthetics (light and glare)
- Noise (operational noise)
- Transportation (parking)

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.

- **Los Angeles County Code.** Updated through 2020, April 13. County of Los Angeles. Contains most of the administrative and regulator ordinances adopted by the Board of Supervisors. The County Code includes, but is not limited to, Building Code, Fire Code, and Environmental Protection (e.g., Stormwater and Runoff Pollution Control, Noise Control, etc.).
- **Los Angeles County General Plan.** Adopted 2015, October 6. County of Los Angeles. The Los Angeles County General Plan provides the policy framework and establishes the long range vision for how and where the unincorporated areas will grow, and establishes goals, policies, and programs to foster healthy, livable, and sustainable communities.
- **La Crescenta-Montrose Community Standards District Update.** Effective on March 12, 2020. County of Los Angeles. The La Crescenta-Montrose Community Standards District Update is a set of

supplemental zoning regulations developed especially for, and applicable only within, the unincorporated community of La Crescenta-Montrose.

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, GUSD 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 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 Board of Education.

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

- Glendale Unified School District website: https://www.gusd.net/CVHSField

Given current COVID-19 health and safety considerations, a hard copy will not be made available in a publicly accessible location. However, a physical copy of the DEIR can be provided upon request to GUSD.

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 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 Negative Declaration.

The Mitigation Monitoring Program for the Crescenta Valley High School Field Improvement Project will be completed as part of the Final EIR, prior to consideration of the project by District Board of Education.

3. Project Description

3.1 PROJECT LOCATION

Crescenta Valley High School (Crescenta Valley HS) is located at 2900 Community Avenue (Assessor's Parcel Numbers 5801-016-903 and 5801-016-904) in the southwest part of the unincorporated community of La Crescenta, Los Angeles County, California (Figure 3-1, *Regional Location*). The Crescenta Valley High School Field Improvement project (proposed project) would be developed within the existing field. Specifically, the project would result in new construction that would impact approximately 4.37 acres of the existing field and track, the existing temporary bleachers, the handball courts, the tennis courts, and an existing storage facility at the southern edge of the campus. The proposed project would not impact other areas of the campus. The 4.37 acres will be referred to as the "project site" and/or "track and field."

The Crescenta Valley HS campus is trapezoidal and bordered by Community Avenue to the north, I-210 to the south, Glenwood Avenue to the east, and Ramsdell Avenue to west (Figure 3-2, *Local Vicinity*, and Figure 3-3, *Aerial Photograph*). The project site is bounded by existing Crescenta Valley HS tennis and basketball courts to the north, with single-family residential uses located further north across Prospect Avenue; Interstate 210 (I-210) to the south; single-family uses to the west across Ramsdell Avenue; and single-family uses to the east. La Crescenta Elementary School is approximately 250 feet to the northeast of the proposed project site. The community of La Crescenta is an unincorporated area of Los Angeles County that is surrounded by the cities of Glendale to the south and west, La Cañada Flintridge and unincorporated Montrose to the east, and the Angeles National Forest to the north. Regional access to the Crescenta Valley HS campus is via I-210, approximately 0.1 mile to the south.

3.2 STATEMENT OF OBJECTIVES

Objectives for the Crescenta Valley High School Field Improvement project will aid decision makers in their review of the project and associated environmental impacts:

1. Provide lighting to allow night use of the track and field to accommodate school-related events and activities.

2. Provide bleachers with adequate capacity to accommodate various spectator events currently held on and off campus.

3. Utilize existing space to enhance opportunities for after-school athletic and extracurricular activities.

4. Enhance sense of community by allowing home football games to occur on campus.

5. Upgrade the athletic fields to boost school pride.

3. Project Description

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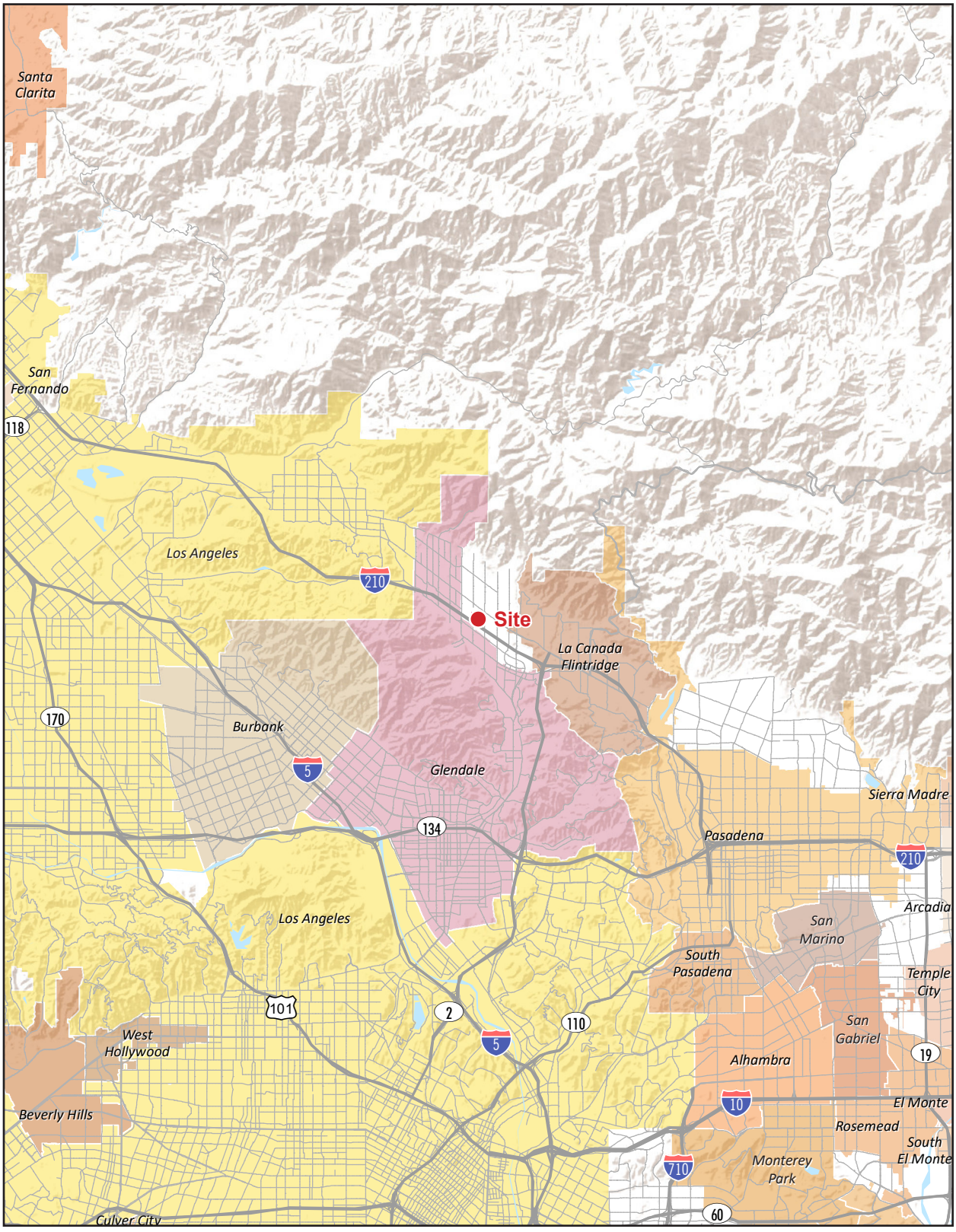
Figure 3-1 - Regional Location
3. Project Description



Note: Unincorporated county areas are shown in white.

0 3
Scale (Miles)

Source: ESRI, 2019

3. Project Description

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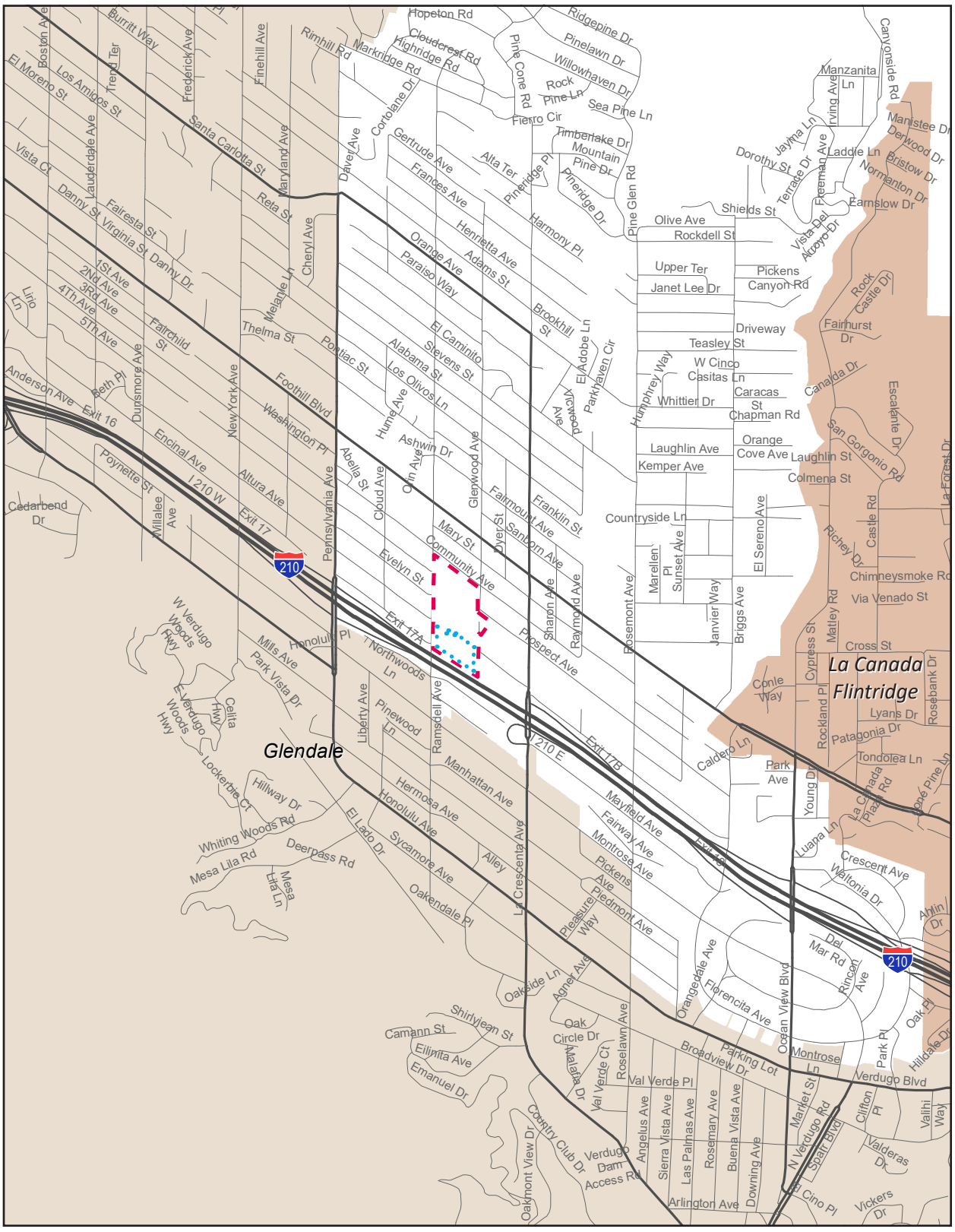
Figure 3-2 - Local Vicinity
3. Project Description



Note: Unincorporated county areas are shown in white.

School Boundary Project Boundary

0 2,000
Scale (Feet)

Source: ESRI, 2020

3. Project Description

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Figure 3-3 - Aerial Photograph
3. Project Description

Source: Nearmap, 2020

3. Project Description

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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 Field Improvements

The proposed project would redevelop the area south of the tennis courts and north of the existing track and field to install permanent bleachers and new field lighting around the existing track and field. Additional improvements would include a restroom and storage/maintenance buildings, a team room, and a concession stand. The proposed project would make use of existing street and on-site parking. No change in site access or parking would occur. The proposed field lighting is necessary for evening use on both weeknights and weekends because varsity games are currently held at Glendale High School, approximately seven miles to the south of the project site. The school's use of the proposed field would be from 7:00 am to 10:00 pm Monday through Friday, and 8:00 am to 10:00 pm on Saturday.

The proposed project includes the development of new bleachers with 3,442 seats. All 3,442 seats would be along the northeastern portion of the existing field sidelines. The bleachers would be aluminum and galvanized steel construction with concrete foundations. In addition, the project would include the installation and operation of four 100-foot-tall light poles along the perimeter of the running track. Figure 4, *Project Site Plan*, illustrates the location of the proposed field lighting fixtures on the project site. Each light pole would mount up to 12 light fixtures using 1,430-watt Musco TLC-LED-1500 lamps and equipped with external glare control visors. The new light poles would provide an average of 50 foot-candles across the field, which is the lighting standard for high school sports safety. The design of the proposed field lighting was selected in order to minimize spill light onto adjacent uses. Additionally, public address (PA) speakers would be mounted on two of the light poles east and west of the bleachers and field. On each pole, one speaker would be pointed toward the bleachers and one toward the field. Speakers would be mounted at a height of approximately 35 feet. The project would also include a 540-square-foot concession stand along the northern perimeter of the project site and a 2,254-square-foot home team room along the southeastern perimeter of the project site. Figure 3-4, *Project Site Plan*, Figure 3-5, *Project Overview*, and Figure 3-6, *Project Overview Closeup*, illustrate the locations of the proposed athletic field improvements on the project site. Table 3-1, *Proposed Athletic Field Improvements*, provides details for each component of the proposed project.

The proposed project would allow for the extended use of the project site by Crescenta Valley HS teams during nighttime hours. Specifically, operation of field lighting would allow these groups to use the field until 10:00 pm. Use of the proposed field lighting by outside groups would require a facilities use permit issued by GUSD, similar to existing conditions, that would establish the allowable hours of use.

3. Project Description

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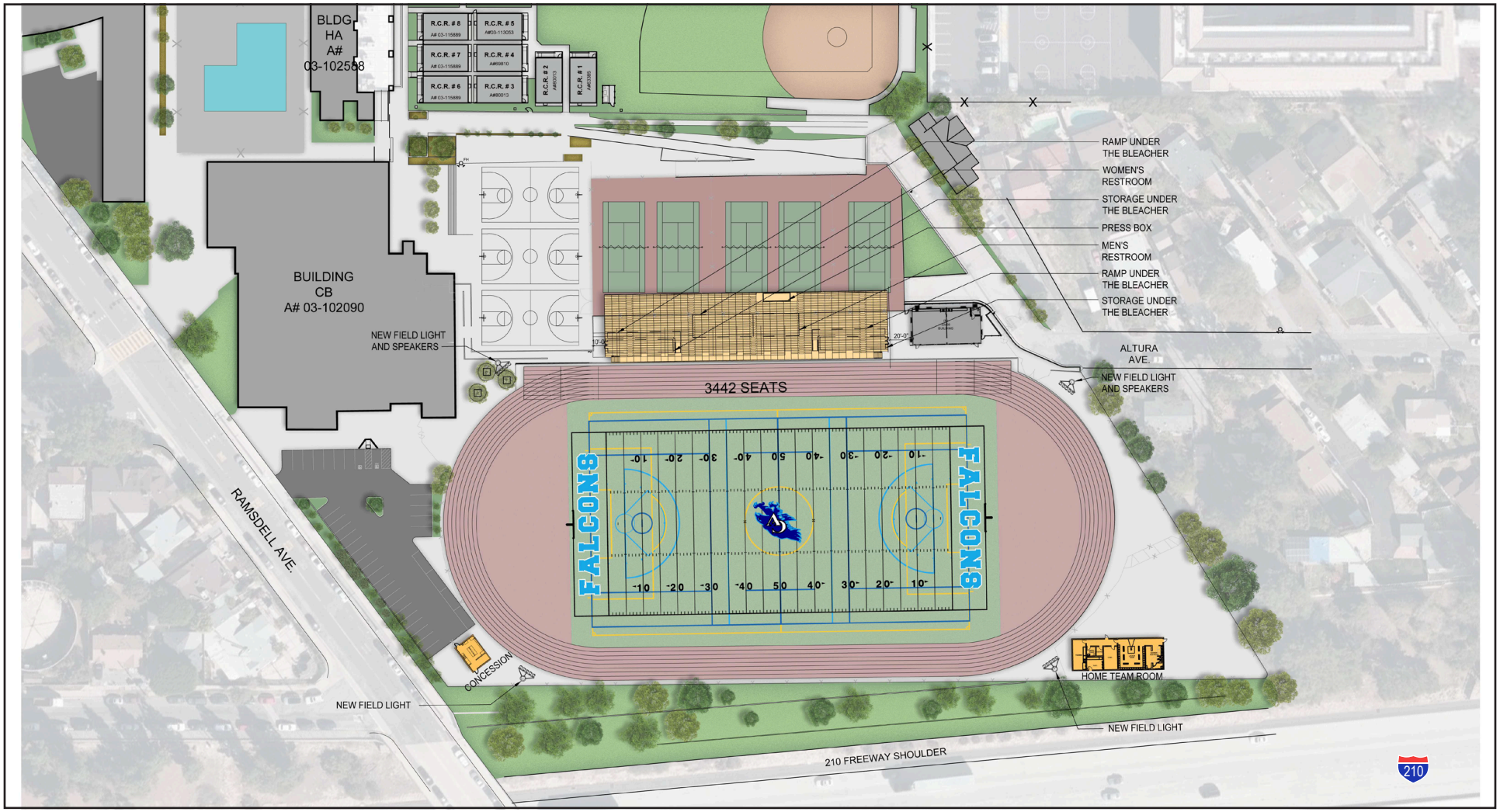
Figure 3-4 - Project Site Plan

3. Project Description



Source: tBP/Architecture, 2020

3. Project Description

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Figure 3-5 - Project Overview
3. Project Description

Source: tBP/Architecture, 2020

3. Project Description

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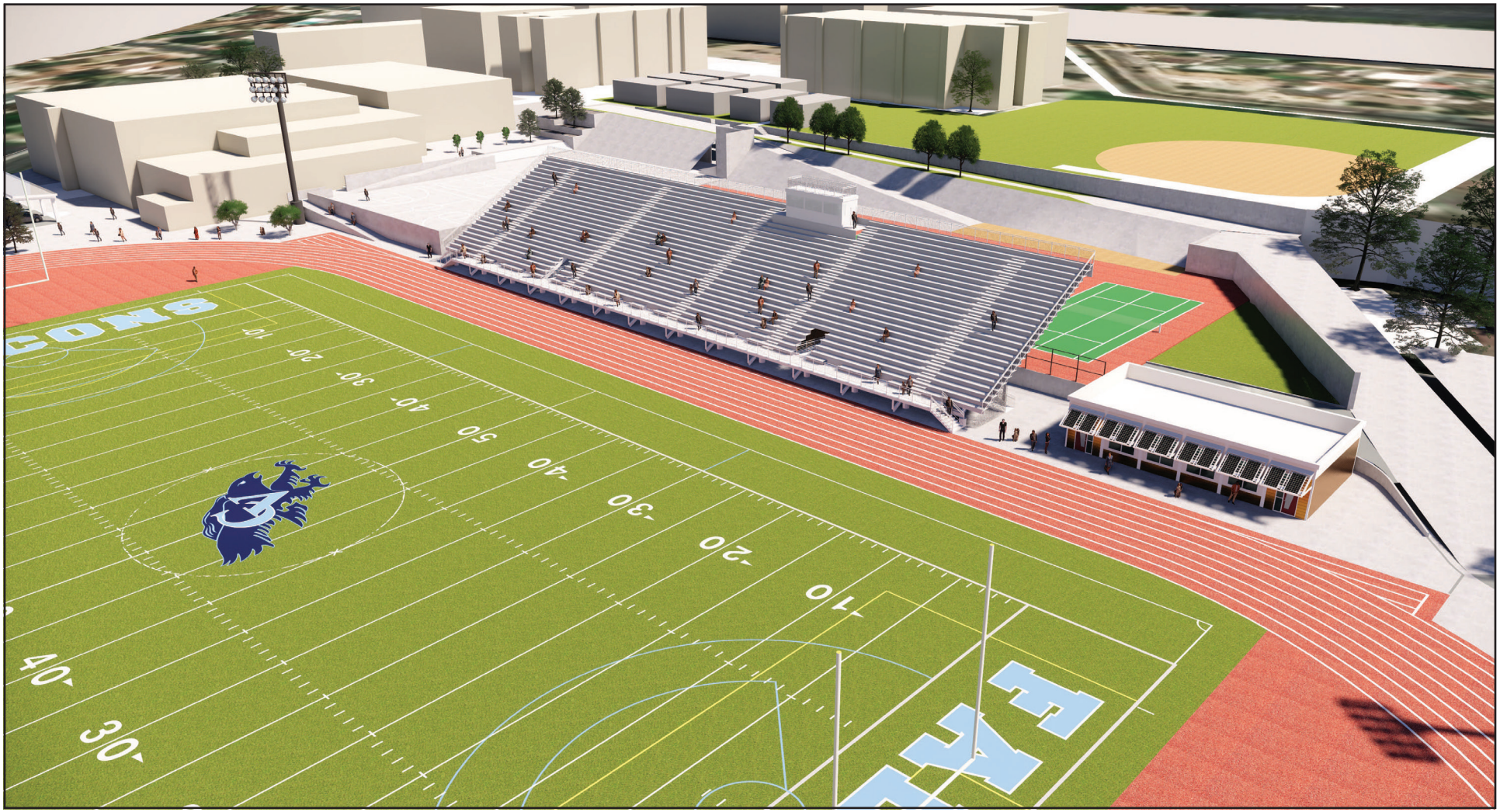
Figure 3-6 - Project Overview Closeup
3. Project Description



Source: tBP/Architecture, 2020

3. Project Description

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Table 3-1 Proposed Athletic Field Improvements

Component	Description
Main Bleachers	3,442 seating capacity 43 feet high 58 feet wide 248 feet long 200-square-foot press box 14,500 total square footage
Concession Stand	540 total square footage 3 sinks 4 service windows
Storage Room	1,300 total square footage
Restrooms	1,860 total square footage
Home Team Room	2,254 total square footage
Scoreboard	10 feet high 32 feet wide
Field Lighting (4)	100 feet tall 12 fixtures per pole 26-inch x 21-inch 1,430W LED lighting fixtures 2 poles would include a public address (PA) system

3.3.2 Project Phasing

Construction activities are anticipated to begin in summer 2022. The construction would be completed in one stage, last 18 to 24 months, and include the following activities—grading and excavation of the northern bleacher area, trenching for site utilities, construction of the bleachers and ancillary structures, and light pole installation. Grading activities would disturb an area of approximately 44,000 square feet and would result in the export of approximately 800 cubic yards of soil.

3.3.3 Use and Scheduling

The proposed project would accommodate various sporting practices and events that currently take place on the existing Crescenta Valley HS campus or at other District campuses (namely Glendale High School for varsity football games). Currently, the project site serves Crescenta Valley HS's physical education purposes and school sports programs. In addition to Crescenta Valley HS uses, outside sporting groups have been individually permitted by GUSD to use the practice field on weekends, generally between the hours of 8:30 am and 6:00 pm on Saturdays and 8:00 am and 6:00 pm on Sundays. Table 3-2, *Crescenta Valley High School Sports Field Proposed Event Schedule*, lists the various sporting practices and events to be held at the project site, which include football, soccer, lacrosse, and track practices and events. The sports field would be used primarily by the Crescenta Valley HS students. No other District campuses would use the sports field on a regular basis. Events that were expected to exceed the seating capacity would be scheduled at other facilities.

3. Project Description

Table 3-2 Crescenta Valley High School Sports Field Proposed Event Schedule

Activity/Use	# of Events	Days of Week	Time		# of Spectators		# of Participants	Outdoor Lighting?
			Start	End	Max	Average		
FALL ACTIVITIES (August 15 to November 15)								
TRACK:								
HS XC/Track PR	5 weekly	Mon–Fri	2 pm	4:30 pm	25	5	125	No
HS XC/Track PR	5 weekly	Saturday	8 am	11 am	25	5	50	No
TRACK FIELD:								
Lower Level Football, B&G Soccer, PR	5 weekly	Mon–Fri (6th period)	2 pm	3 pm	-	-	30	No
Football PR	5 weekly	Mon–Fri	2 pm	5 pm	25	5	25–75	No
B&G Soccer PR	5 weekly	Mon–Fri	6 pm	9 pm	25	5	25–75	No
Football PR	1 weekly	Saturday	9 am	12 pm	25	5	25–75	No
Football Contest - Lower Levels	10	Thurs or Fri	3:15 pm	6 pm	100	50	40	No
Football Contests Varsity	5	Friday	7 pm	10 pm	1000	500	120	Yes
Public Use[1]	TBD							
WINTER ACTIVITIES (November 1 to March 1)								
TRACK:								
HS Track PR	5 weekly	Mon–Fri	2 pm	4:30 pm	25	5	125	No
HS Track PR	5 weekly	Saturday	8 am	11 am	25	5	50	No
TRACK FIELD:								
B&G Soccer PR	5 weekly	Mon–Fri	2 pm	6 pm	25	5	150	No
B&G Soccer PR	1 weekly	Saturday	9 am	12 pm	25	5	150	No
Boys' Soccer Contests	25	TBD	TBD	TBD	400	100	60	Rarely[2]
Girls' Soccer Contests	20	TBD	TBD	TBD	400	100	60	Rarely[2]
Football PR	5 weekly	Mon–Fri	2 pm	5 pm	25	5	25–75	No
Lacrosse Boys	5 weekly	Mon-Fri	2 pm	5 pm	25	25	30	No
Public Use[1]	TBD							
SPRING ACTIVITIES (February 1 to May 30)								
TRACK:								
HS/MS Track PR	5 weekly	Mon–Fri	2 pm	5:30 pm	25	5	175	No
HS Track PR	1 weekly	Saturday	8 am	11 am	25	5	50	No
HS Track Meets	5	Thursday	2 pm	7 pm	400	100	250	No
MS Track Meets	6	Tues or Thurs	2 pm	7 pm	400	150	150	No
Lacrosse Girls	5 weekly	Mon-Fri	2 pm	5pm	25	25	30	No
Public Use[1]	TBD							

Note: The anticipated numbers of spectators and participants have been provided by the Crescenta Valley HS athletic director.
PR = practice; B&G = boys and girls; XC = cross-country; TBD = to be determined
1. Regular use of the field by community groups is not anticipated except for occasional use by groups involving younger children.
2. Times of soccer contests have not been determined but they generally start between 3:00 pm to 5:00 pm, when outdoor lighting is not required. However, in rare occasions a contest could occur past 6:00 pm, at which time the outdoor lighting would be used.

The highest spectator attendance is projected for the fall football games. Currently, home football games are played at Glendale High School, approximately seven miles to the south, which has a 6,500-seat capacity stadium. Based on attendance at Crescenta Valley High School football games for the past three years, the average attendance at varsity football games has been 1,600 spectators.

As shown in Table 3-2, in general, the track and field would be used for school athletic activities from 8:00 am to 9:00 pm during the week and from 8:00 am to 12:00 pm on Saturdays. No specific schedules for soccer events have been provided, but typical events would end by 9:00 pm during the winter and spring seasons. Only football games would continue past 9:00 pm, and they would be scheduled to end by 10:00 pm. The sports field would be closed when not in use by the District; however, it would be available for public use under the rules and regulations of the Civic Center Act through a permitting process and for a fee. Each request to use the sports field would be reviewed and approved by the GUSD administration. Therefore, the community use schedule is shown as "to be determined" in Table 3-2.

3.4 INTENDED USES OF THE EIR

This Draft EIR is a project DEIR that 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 Glendale 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
Glendale Unified School District	Consider Final EIR for certification and project approval
Responsible Agencies	**Action**
Department of General Services, Division of State Architect	Approval of construction drawings
Los Angeles Regional Water Quality Control Board	Construction stormwater runoff permits, Storm Drain MS4 permit, NPDES permit
South Coast Air Quality Management District	Rule 201: Permit to construct
Los Angeles County Public Works/Engineering	Off-site improvement permits such as drainage, sewer, water, etc.
Los Angeles County Fire Department	Fire and emergency access

3. Project Description

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4. Environmental Setting

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 unincorporated community of La Crescenta in Los Angeles County is located within the San Fernando Valley Basin, a coastal plain at the central portion of the Transverse Ranges Geomorphic Province. The Transverse Ranges Geomorphic is a complex series of mountain ranges and valleys distinguished by an anomalous dominant east-west trend. The San Fernando Valley Basin is bounded on the north and northwest by the Santa Susana Mountains, on the north and northeast by the San Gabriel Mountains, on the east by the San Rafael Hills, on the south by the Santa Monica Mountains and Chalk Hills, and on the west by the Simi Hills.

The unincorporated community of La Crescenta is in the central portion of Los Angeles County and is surrounded by the cities of Glendale to the south and west, La Cañada Flintridge and unincorporated Montrose to the east, and the Angeles National Forest to the north. Interstate 210 (I-210 or Foothill Freeway) transects the southern portion of the community and provides regional circulation to and through the community (see Figure 3-1, *Regional Location*).

4.2.2 Regional Planning Considerations

South Coast Air Basin Air Quality Management Plan

The unincorporated community of La Crescenta is in the South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (South Coast AQMD). 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 (AQMP). Air pollutants for which ambient air quality standards (AAQS) have been developed are known as criteria air pollutants—ozone (O_3), carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide, coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead. VOC and NO_x are criteria pollutant precursors and go on to form

secondary criteria pollutants, such as O_3, 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 SoCAB AQMP, the SoCAB is designated nonattainment for O_3, $PM_{2.5}$, PM_{10}, and lead (Los Angeles County only) under the California and National AAQS and nonattainment for NO_2 under the California AAQS. The proposed project's consistency with the applicable AAQS is discussed in Section 5.2, *Air Quality*.

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 the State of 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. Based on the GHG emissions inventory conducted for its 2008 Scoping Plan, the California Air Resources Board (CARB) approved a 2020 emissions limit of 427 million metric tons of carbon dioxide-equivalent emissions ($MMTCO_2e$) for the state (CARB 2008). CARB is required to update the Scoping Plan every five years. 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 (2016). The 2016-2017 update to the Scoping Plan addresses the 2030 target of a 40 percent below 1990 levels. The project's consistency with CARB's Scoping Plan is analyzed in Section 5.4, *Greenhouse Gas Emissions*.

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. The Southern California Association of Governments' (SCAG) targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 17 regions in California managed by a metropolitan planning organization (MPO). In addition, SB 375 requires CARB to update the targets for the MPOs every eight years. The targets as set by CARB in 2010 for the SCAG region are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The Draft 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) projects that the SCAG region will meet its GHG per capita reduction

targets of 8 percent by 2020 and 19 percent by 2035. Additionally, it is also projected that implementation of the plan would reduce VMT per capita for year 2045 by 4.1 percent compared to baseline condition for the year (SCAG 2019).

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 MPO 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. It 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, the California Department of Transportation, and other agencies in preparing regional planning documents. SCAG has developed regional plans to achieve specific regional objectives, as discussed below.

The RTP/SCS is updated periodically to allow for the consideration and inclusion of new transportation strategies and methods. On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020–2045 RTP/SCS), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The 2020-2045 RTP/SCS includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods; expanding mobility choices by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2020).

The RTP/SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement). The RTP/SCS does not require that local general plans, specific plans, or zoning be consistent, but provides incentives to governments and developers for consistency. The proposed project's consistency with the applicable 2020-2045 RTP/SCS policies is analyzed in detail in Section 5.4, *Greenhouse Gas Emissions*.

Los Angeles Metropolitan Transit Authority

The Los Angeles Metropolitan Transit Authority (Metro) is Los Angeles County's designated congestion management agency. Metro is responsible for the conformance monitoring and updating of Los Angeles County's Congestion Management Program (CMP), a multimodal program. The most recent CMP was issued by Metro in 2010. The goals of the CMP are to link local land use decisions with their impacts on regional transportation and air quality, and to develop partnerships among transportation decision makers on devising appropriate transportation solutions that include all modes of travel. Senate Bill 743 contains amendments to current congestion management law that allow counties to opt out of the LOS standards that would otherwise apply in areas where CMPs are utilized. Pursuant to California Government Code Section 65088.3, local jurisdictions may opt out of the CMP requirement without penalty if a majority of the local jurisdictions

representing a majority of the county's population formally adopt resolutions requesting to opt out of the program. As of November 2019, the majority of local agencies representing the majority of the county's population have adopted resolutions to opt out of the program. Therefore, the CMP is no longer applicable in Los Angeles County.

4.3 LOCAL ENVIRONMENTAL SETTING

The Crescenta Valley HS campus is trapezoidal and bordered by Community Avenue to the north, I-210 to the south, Glenwood Avenue to the east, and Ramsdell Avenue to west (Figure 3-2, *Local Vicinity*, and Figure 3-3, *Aerial Photograph*). The project site is bounded by existing Crescenta Valley HS tennis and basketball courts to the north, with single-family residential uses located further north across Prospect Avenue; Interstate 210 (I-210) to the south; single-family uses to the west across Ramsdell Avenue; and single-family uses to the east. The community of La Crescenta is an unincorporated area of Los Angeles County that is surrounded by the cities of Glendale to the south and west, La Cañada Flintridge and unincorporated Montrose to the east, and the Angeles National Forest to the north. Regional access to the Crescenta Valley HS campus is via I-210, approximately 0.1 mile to the south.

4.3.1 Existing Land Use

Crescenta Valley HS campus is approximately 18.5 acres in size and is currently developed with classroom buildings, administration building, auditorium, a gymnasium, an aquatic center, three basketball courts, five lighted outdoor tennis courts, a baseball diamond, a multipurpose track and field, an outdoor lunch area, cafeteria, staff/visitor parking lot, student parking lots, pedestrian walkways, and landscaped planters. School enrollment for the 2019-20 school year included 2,643 students attending 9th through 12th grade, along with 150 faculty and staff (CDE 2020). Beginning in March 2019, due to Covid-19 Stay Home Order, there have been no students or sport activities occurring on campus. However, in typical conditions, the bell schedule begins the school day at 7:55 am and dismissal is at 3:03 pm.

The existing track and field is on the southernmost portion of the campus, to the south of the basketball and tennis courts. The track and field is 4.37 acres that consists of an artificial turf field, a synthetic track around the field, and a long-jump pit at the southeastern corner. The field does not have permanent bleachers or lights. The existing basketball and tennis courts to the north are illuminated by 14 light poles. A small storage facility is at the northeastern corner of the field.

The track and field uses within the project site are currently used by Crescenta Valley HS for physical education purposes and school sports programs. In addition to Crescenta Valley HS uses, outside sporting groups have been individually permitted by GUSD to use the practice field on weekends, generally between the hours of 8:30 am and 6:00 pm on Saturdays and 8:00 am and 6:00 pm on Sundays.

Main vehicular access to the Crescenta Valley HS campus is provided along Community Avenue and Ramsdell Avenue. The primary campus parking lot is in the southwest of the campus along Ramsdell Avenue, offering 236 spaces. Street parking is available on Ramsdell Avenue and Community Avenue. Additional parking for

special events such as graduation, open house, and varsity basketball playoff games is accommodated at the La Crescenta Elementary School play yard to the east.

4.3.2 Scenic Features

The project site is surrounded by academic facilities on the Crescenta Valley HS campus, single-family residences, and the I-210. Directly to the north of the project site is the high school campus, with single-family residences further north across Community Avenue. To the east are single-family residences. La Crescenta Elementary School is northeast of the project site, adjacent the existing baseball field. To the south is I-210. To the west and northwest are single-family residences and a storage yard across Ramsdell Avenue. The project's surrounding vicinity is urban and fully developed with residential, commercial, and educational uses. The nearest scenic areas in the vicinity are the Verdugo Mountains Open Space Preserve, approximately 0.5 mile to the southwest, and the Angeles National Forest, approximately 1.25 miles to the northeast. Details related to impacts on the project site's scenic features and visual character are provided in Section 5.1, *Aesthetics*.

4.3.3 Climate and Air Quality

As noted above, the La Crescenta community is in the SoCAB, which is managed by South Coast AQMD. The SoCAB is designated nonattainment for ozone (O_3), fine inhalable particulate matter ($PM_{2.5}$), and lead (Los Angeles County only) under the California and National AAQS and nonattainment for coarse inhalable particulate matter (PM_{10}) and nitrogen dioxide (NO_2) under the California AAQS. Additional information regarding air quality and climate change regulations affecting the La Crescenta community is provided in Section 4.2.2, *Regional Planning Considerations*, above. Existing air quality conditions in the La Crescenta community are discussed in more detail in Sections 5.2, *Air Quality*, and 5.4, *Greenhouse Gas Emissions*.

4.3.4 Geology and Landform

The proposed project site is not listed within an Alquist-Priolo Earthquake Fault Zone or an area prone to liquefaction (CGS 1999). The Sierra Madre Fault Zone is approximately 2.5 miles from the site. As identified in the Seismic Hazard Zone Report, the soil in the project site is mostly artificial fill (DMG 1998). Refer to Section 5.3, *Geology and Soils*, for additional information concerning geological and soil conditions and an analysis of the proposed project's impacts on geology and soils.

4.3.5 Hydrology

The project site is in the Los Angeles River Watershed, which spans about 834 square miles in southwest Los Angeles County, extending from the Santa Monica Mountains to the Simi Hills in the western portion and from the Santa Susana Mountains to the San Gabriel Mountains in the eastern portion. The watershed encompasses and is shaped by the path of the Los Angeles River, which flows from the mountains eastward to the northern corner of Griffith Park (LACDPW 2019). The proposed project area is within Federal Emergency Management Act (FEMA) Flood Zone Designation X (Zone X) (FEMA 2008). Zone X is an area of minimal flood hazard, usually depicted on Flood Insurance Rate Maps (FIRMs) as above the 500-year flood level. Refer to Section

5.6, *Hydrology and Water Quality*, for additional information regarding hydrological conditions and an analysis of project impacts on hydrology and water quality.

4.3.6 Noise

The project site is in a predominantly residential area and is subject to noise from transportation and stationary sources. In addition to roadway noise and residential noise sources (property maintenance, light mechanical equipment, people talking, etc.), the project vicinity is also subject to recurring events of athletic field noise from the existing uses on the project site. Noise-sensitive receptors in the vicinity of the proposed project are the residential uses immediately east of the track and field off Altura Avenue and the residential uses west of the parking lot of the track and field off Ramsdell Avenue. Refer to Section 5.7, *Noise*, for additional information concerning the noise environment and an analysis of project-related noise impacts.

4.3.7 General Plan and Zoning

The County of Los Angeles Land Use Element designates the project site as Public Semi-Public (Los Angeles County 2015). The high school campus is zoned R1 – Single Family Residential (Los Angeles County 2019); however, government (state) owned facilities (e.g., public schools) can override county zoning (Government Resources Code Sections 53094, 65402[a], 65403; Public Resources Code Section 21151.2).

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.

B. A summary of projections contained in an adopted General Plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impact analysis in this DEIR uses Method A. The list of cumulative projects was prepared based on data provided by the Traffic Study for Crescenta Valley High School Field Improvement Project (see Appendix F)is provided below. A total of 97 cumulative projects were identified in the study area for the traffic study and are shown in Table 4-1, *Cumulative Projects*, Table 2 of Appendix F, *Area Project Trips Generation Estimate,* and Figure 4.1, *Cumulative Developments Location Map*. These projects are future projects that have been approved

but not yet built and/or for which development applications have been filed and are under consideration in the community of La Crescenta-Montrose and the cities of Glendale and La Cañada Flintridge.

Table 4-1 Cumulative Projects

No.	Name	Address	Land Use	Size
1	Accessory Dwelling Units	3123 Harmony Place, La Crescenta CA 91214 & 3157 Harmony Place, La Crescenta CA 91214	Single-Family Homes	2 DU
2	Accessory Dwelling Units	3155 Brookhill Street, La Crescenta CA 91214 & 3145 Brookhill Street, La Crescenta CA 91214	Single-Family Homes	2 DU
3	Accessory Dwelling Units	2948 El Caminito Street, La Crescenta CA 91214 & 2938 Caminito Street, La Crescenta CA 91214	Single-Family Homes	2 DU
4	Accessory Dwelling Units	2948 El Caminito Street, La Crescenta CA 91214 & 2938 Caminito Street, La Crescenta CA 91214	Single-Family Homes	2 DU
5	Accessory Dwelling Units	2836 Orange Avenue, La Crescenta CA 91214 & 4810 Glenwood Avenue, La Crescenta CA 91214	Single-Family Homes	2 DU
6	Accessory Dwelling Units	4627 Dyer Street, La Crescenta CA 91214 & 2835 Sanborn Avenue, La Crescenta CA 91214	Single-Family Homes	2 DU
7	Accessory Dwelling Units	2436 Rockdell Street, La Crescenta CA 91214, 5310 Rosemont Avenue, La Crescenta CA 91214, 2417 Olive Avenue, La Crescenta CA 91214 & 2435 Olive Avenue, La Crescenta CA 91214	Single-Family Homes	4 DU
8	Accessory Dwelling Units	2357 Pickens Canyon Road, La Crescenta CA 91214 & 2324 Pickens Canyon Road, La Crescenta CA 91214	Single-Family Homes	2 DU
9	Accessory Dwelling Units	5250 Briggs Avenue, La Crescenta CA 91214, 2368 Teasley Street, La Crescenta CA 91214 & 2371 Teasley Street, La Crescenta CA 91214	Single-Family Homes	3 DU
10	Accessory Dwelling Units	2649 Mary Street, La Crescenta CA 91214 & 2619 Mary Street, La Crescenta CA 91214	Single-Family Homes	2 DU
11	Accessory Dwelling Units	2608 Prospect Avenue, La Crescenta CA 91214 & 2604 Prospect Avenue, La Crescenta CA 91214	Single-Family Homes	2 DU
12	Accessory Dwelling Units	2551 Manhattan Avenue, Montrose CA 91020, 2538 Piedmont Avenue, Montrose CA 91020 & 2504 Manhattan Avenue, Montrose CA 91020	Single-Family Homes	3 DU
13	Accessory Dwelling Units	4321 Briggs Avenue, Montrose CA 91020 & 4329 Briggs Avenue, Montrose CA 91020	Single-Family Homes	2 DU
14	Accessory Dwelling Units	2160 Glenada Avenue, Montrose CA 91020 & 4120 Rincon Avenue, Montrose CA 91020	Single-Family Homes	2 DU
15	Single-Family Development	2642 Prospect Avenue, La Crescenta CA 91214 & 2646 Prospect Avenue, La Crescenta CA 91214	Single-Family Homes	2 DU
16	Single Family Development	2322 Park Avenue, Montrose CA 91020 & 2326 Park Avenue, Montrose CA 91020	Single-Family Homes	2 DU
17	Accessory Dwelling Units	2820 Harmony Place, La Crescenta CA 91214	Single-Family Homes	1 DU
18	Accessory Dwelling Units	2418 Cross Street, La Crescenta CA 91214	Single-Family Homes	1 DU
19	Accessory Dwelling Units	2410 Laughlin Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU

4. Environmental Setting

Table 4-1 Cumulative Projects

No.	Name	Address	Land Use	Size
20	Accessory Dwelling Units	2763 Fairmount Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
21	Accessory Dwelling Units	2700 Los Olivos Lane, La Crescenta CA 91214	Single-Family Homes	1 DU
22	Accessory Dwelling Units	2315 Caracas Street, La Crescenta CA 91214	Single-Family Homes	1 DU
23	Accessory Dwelling Units	4950 Rosemont Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
24	Accessory Dwelling Units	2512 Los Amigos Street, La Crescenta CA 91214	Single-Family Homes	1 DU
25	Accessory Dwelling Units	2542 Kemper Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
26	Accessory Dwelling Units	3057 Gertrude Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
27	Accessory Dwelling Units	2713 Mayfield Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
28	Accessory Dwelling Units	3122 Los Olivos Lane, La Crescenta CA 91214	Single-Family Homes	1 DU
29	Accessory Dwelling Units	4266 Pennsylvania Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
30	Accessory Dwelling Units	2334 Del Mar Road, Montrose CA 91020	Single-Family Homes	1 DU
31	Accessory Dwelling Units	2404 Mayfield Avenue, Montrose CA 91020	Single-Family Homes	1 DU
32	Accessory Dwelling Units	2502 Community Avenue, Montrose CA 91020	Single-Family Homes	1 DU
33	Accessory Dwelling Units	2575 Mayfield Avenue, Montrose CA 91020	Single-Family Homes	1 DU
34	Accessory Dwelling Units	2923 Community Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
35	Accessory Dwelling Units	4128 Ramsdell Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
36	Accessory Dwelling Units	2264 Luana Lane, Montrose CA 91020	Single-Family Homes	1 DU
37	Single-Family Development	5919 Canyonside Road, La Crescenta CA 91214	Single-Family Homes	1 DU
38	Single-Family Development	2805 Orange Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
39	Single-Family Development	2322 Orange Cove Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
40	Single-Family Development	2440 Cross Street, La Crescenta CA 91214	Single-Family Homes	1 DU
41	Single-Family Development	2829 Willowhaven Drive, La Crescenta CA 91214	Single-Family Homes	1 DU
42	Single-Family Development	4927 El Sereno Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU

Table 4-1 Cumulative Projects

No.	Name	Address	Land Use	Size
43	Single-Family Development	4825 Briggs Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
44	Single-Family Development	2620 El Caminito St. La Crescenta- Montrose, CA 91214	Single-Family Homes	1 DU
45	Retail to Office	3825 Ocean View Boulevard 1/2 CA 91020	General Office	1700 SF
46	Single-Family Development	2535 Piedmont Avenue, Montrose CA 91020	Single-Family Homes	1 DU
47	Two Story Apartments Over Single Story Parking Garage	2231 Mira Vista Avenue, Montrose CA 91020	Multifamily Housing (Low Rise)	1 DU
48	3 Story Residential Apartment Building	2225 Mira Vista Avenue, Montrose CA 91020	Multifamily Housing (Mid-Rise)	9 DU
49	Single-Family Development	2740 Prospect Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
50	Single-Family Development	2716 Mary Street, La Crescenta CA 91214	Single-Family Homes	1 DU
51	Low-Rise Multi-Family (Replacing 1 Single-Family Residence)	2500 Hermosa Avenue, Montrose CA 91020	Multifamily Housing (Low Rise)	3 DU
52	Proposed Apartment w/ 16 Covered Parking Spaces	2218 Montrose Avenue 1/2, Montrose CA 91020	Multifamily Housing (Low Rise)	8 DU
53	Single-Family Development	2644 Prospect Avenue, La Crescenta CA 91214	Single-Family Homes	1 DU
54	Two Story Apartments Over Single Story Parking Garage	2906 Fairmount Avenue, La Crescenta CA 91214	Multifamily Housing (Low Rise)	10 DU
55	Single-Family Development	4329 Briggs Avenue, Montrose CA 91020	Single-Family Homes	4 DU
56	Multi-Family Apartments	2314 Montrose Avenue, Montrose CA 91020	Multifamily Housing (Low Rise)	5 DU
57	Two Story Apartment Connected to Existing Two Story Apartment	4360 Ocean View Boulevard, Montrose CA 91020	Multifamily Housing (Low Rise)	4 DU
58	Apartment Building Replacing Single-Family Residence	4036 Rosemont Avenue, Montrose CA 91020	Multifamily Housing (Low Rise)	5 DU
59	3 Story Apartment Building	4520 Rosemont Avenue, La Crescenta CA 91214	Multifamily Housing (Low Rise)	6 DU
60	Doctor's Office Replacing Cleaners	3067 Foothill Boulevard, La Crescenta CA 91214	Medical/Dental Office	500 SF
61	Townhouse Apartment Building	1961 Waltonia Drive, Montrose CA 91020	Multifamily Housing (Low Rise)	6 DU
62	Single-Family Development	2461 Florencita Drive, Montrose CA 91020	Single-Family Homes	1 DU

4. Environmental Setting

Table 4-1 Cumulative Projects

No.	Name	Address	Land Use	Size
63	New Office	2540 Foothill Boulevard, La Crescenta CA 91214	General Office	700 SF
64	Med Office	4141 Ocean View Boulevard #Suite # 4148, Montrose CA 91020	Medical/Dental Office	1600 SF
65	Single-Family Development	3115 Los Olivos Lane, La Crescenta CA 91214	Single-Family Homes	1 DU
66	Two Story Apartment Units with 37 Parking Spaces	2454 Montrose Avenue, Montrose CA 91020	Multifamily Housing (Low Rise)	16 DU
67	New Detached 496 SF Accessory Dwelling Unit at rear	4908 Trend Terrace Glendale C A91214	Single-Family Homes	1 DU
68	Mixed-use Development (Retail and Apartments)	3950 Foothill Blvd, Glendale CA 91214	Shopping Center	38900 SF
69	600 SF Accessory Dwelling Unit	3700 Pontiac St Glendale CA 91214	Single-Family Homes	1 DU
70	Accessory Dwelling Unit	4419 Lowell Ave Glendale CA 91214	Single-Family Homes	1 DU
71	Detached Accessory Dwelling Unit at Rear	4144 Lowell Ave Glendale CA 91214	Single-Family Homes	1 DU
72	416 SF Garage Conversion to Accessory Dwelling Unit	3628 2nd Ave Glendale CA 91214	Single-Family Homes	1 DU
73	Convert Existing 398 Square-Foot Detached Garage into an Accessory Dwelling Units and to Construct A 202 Square-Foot Addition to the Accessory Dwelling Unit	3313 Fairmount Ave Glendale CA 91214	Single-Family Homes	1 DU
74	Convert Portion of Existing Single-Family Residence Into Accessory Dwelling Unit	3515 Community Ave Glendale CA 91214	Single-Family Homes	1 DU
75	281 Square-Foot Accessory Dwelling Unit Attached to Existing Garage	3425 Maryann St Glendale CA 91214	Single-Family Homes	1 DU
76	Convert Existing Guest House 499 Square-Foot and add 101 Square-Foot at the Rear	3315 Mary St Glendale CA 91214	Single-Family Homes	1 DU
77	Construct a 410 Square-Foot Accessory Dwelling Unit Addition To An Existing 400 Square-Foot Detached Two Car Garage	3257 Prospect Ave Glendale CA 91214	Single-Family Homes	1 DU
78	New 265 S.F. Accessory Dwelling Unit	3445 Montrose Ave Glendale CA 91214	Single-Family Homes	1 DU
79	Convert Existing Garage into ADU and Add 221 Square Feet to The Rear	3210 Mills Ave Glendale CA 91214	Single-Family Homes	1 DU
80	Garage conversion to ADU (3919 Ramsdell Avenue). Conversion of SF home to ADU and construction of 2nd SF home (3912 Ramsdell)	3912-3919 Ramsdell Avenue Glendale CA 91214	Single-Family Homes	1 DU
81	38-unit Multi-Family Affordable Housing Project	2817 Montrose Avenue Glendale CA 91214	Multifamily Housing (Mid Rise)	38 DU

Table 4-1 Cumulative Projects

No.	Name	Address	Land Use	Size
82	Conversion of garage and addition to garage for a total of 599 SF ADU	2848 Manhattan Ave Glendale CA 91214	Single-Family Homes	1 DU
83	Convert Existing 240 Square-Foot One Car Garage Into An Accessory Dwelling Unit and to Construct A 236 Square-Foot ADU Addition (Total 476 Square-Foot ADU).	2941 Piedmont Ave Glendale Ca 91214	Single-Family Homes	1 DU
84	Construct a new 18-unit affordable residential housing project that includes the demolition of (e) commercial building built in 1983.	2941 Honolulu Avenue Glendale CA 91214	Multifamily Housing (Low Rise)	18 DU
85	To demolish an existing one-story, 1,140 square-foot single-family residence and detached two-car garage (constructed 1940), and to construct a three-story, 8,373 square foot, six-unit, multi-family residential building	2760 Hermosa Ave Glendale CA 91020	Multifamily Housing (Mid-Rise)	6 DU
86	New 2-story house on a through-lot	2636 Manhattan Ave Glendale CA 91020	Single-Family Homes	1 DU
87	Conversion of the existing detached garage and addition of 110 sq. ft to the garage for the proposed ADU.	1539 Broadview Dr Glendale CA 91208	Single-Family Homes	1 DU
88	448 SF 2nd-story ADU on top of new detached garage	3457 Buena Vista Ave Glendale CA 91208	Single-Family Homes	1 DU
89	Convert 465 sq. ft. garage to ADU	3310 Sparr Blvd Glendale CA 91208	Single-Family Homes	1 DU
90	588sf ADU attached to existing detached garage	1068 Eilinita Ave Glendale CA 91208	Single-Family Homes	1 DU
91	Construct new 4453 sq. ft. residence and 598 sq. ft. garage on existing lot	1307 Olive Ln, La Cañada Flintridge, CA 91011	Single-Family Homes	1 DU
92	Demolition of existing building (1650 SF), construction of new 2250 sf building	1401 Foothill Blvd, La Cañada Flintridge, CA 91011	General Office	600 SF
93	Build new 2-story office/commercial/retail building with restaurant at 1st floor above 1 level basement parking	2236 Foothill Blvd, La Cañada Flintridge, CA 91011	Shopping Center	6200 SF
94	Two New Houses	2000 Chimneysmoke Rd, La Cañada Flintridge, CA 91011	Single-Family Homes	2 DU
95	Construct a New 2 story Residence	1307 Olive Ln, La Cañada Flintridge, CA 91011	Single-Family Homes	1 DU
96	Proposed new two story Single Family Residence with attached 2 car garage: 5 bedrooms, 5.5 bathrooms	4698 Leir Drive, La Cañada Flintridge, CA 91011	Single-Family Homes	1 DU

SF=Square Feet; DU= Dwelling Units
Source: Appendix F

4. Environmental Setting

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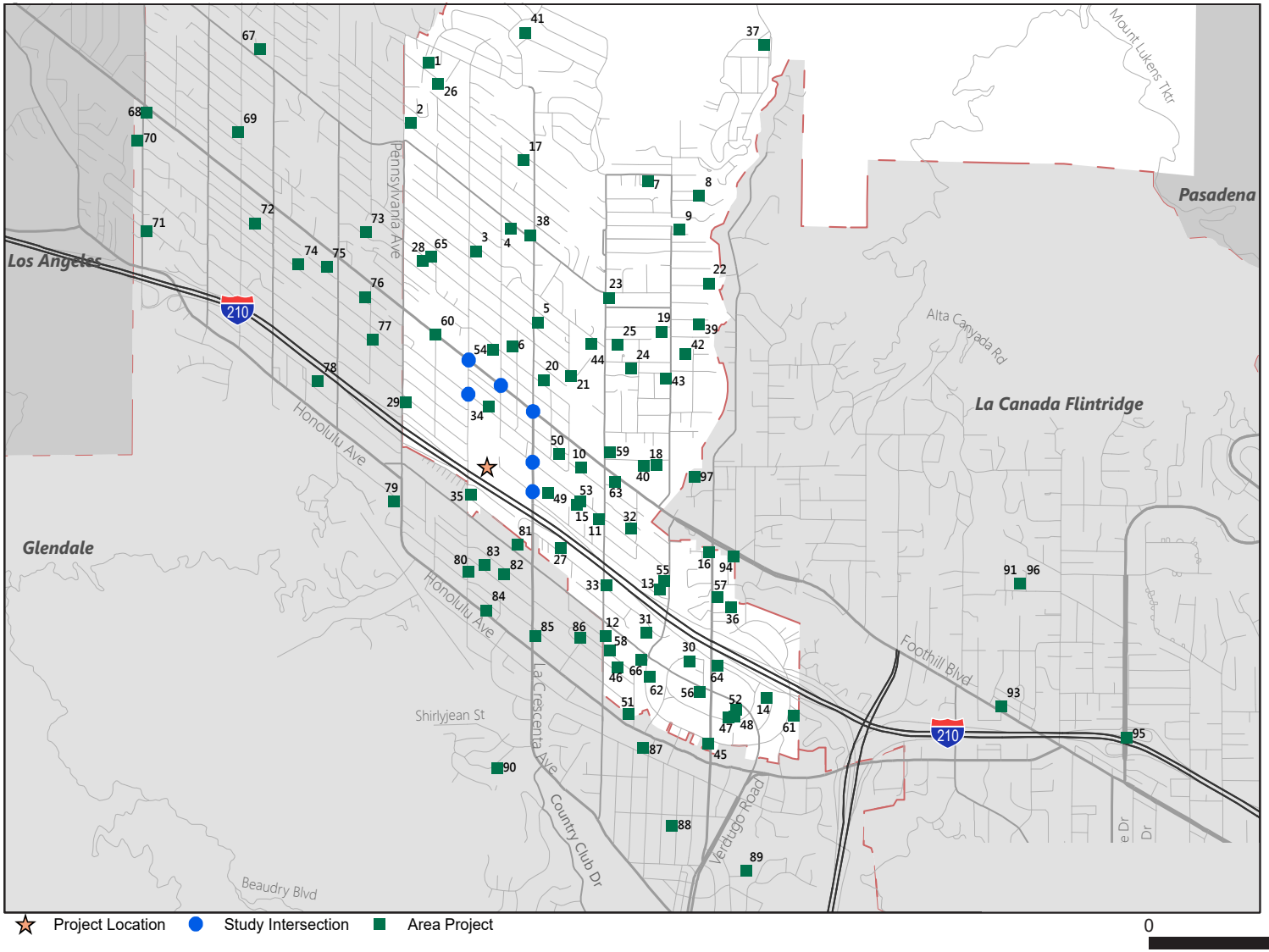
Figure 4.1 - Cumulative Developments Location Map

5. Environmental Analysis



Source: KOA, 2021

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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 DEIR. This scope was determined in the initial study and notice of preparation (NOP), which were published on February 20, 2020 (see Appendix A), and through public and agency comments received during the NOP comment period from February 20, 2020, to March 20, 2020 (see Appendix A). Environmental issues and their corresponding sections are:

- 5.1 Aesthetics
- 5.2 Air Quality
- 5.3 Energy
- 5.4 Geology and Soils
- 5.5 Greenhouse Gas Emissions
- 5.6 Hazards and Hazardous Materials
- 5.7 Hydrology and Water Quality
- 5.8 Noise
- 5.9 Public Services
- 5.10 Transportation
- 5.11 Wildfire

Sections 5.1 through 5.11 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.

The initial study also determined that certain issues under an environmental topic would not be significantly affected by implementation of the project; these issues are not discussed further in this DEIR.

Organization of Environmental Analysis

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

- Environmental Setting
- Thresholds of Significance
- Environmental Impacts
- Cumulative Impacts

5. Environmental Analysis

- Level of Significance Before Mitigation
- Mitigation Measures
- Level of Significance After Mitigation
- References

In addition, Chapter 1, *Executive Summary,* has a table that 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.

5.1 AESTHETICS

This section of the Draft Environmental Impact Report (DEIR) discusses potential impacts to the visual appearance and character of the project site and its surroundings associated with the implementation of the proposed project. The analysis in this section is based in part on the following technical report(s):

- *Lighting Report for Crescenta Valley HS FB*, Musco Sports Lighting, April 2020

A complete copy of this study is included in the technical appendices to this DEIR (Appendix B)

5.1.1 Environmental Setting

5.1.1.1 REGULATORY BACKGROUND

State and local laws, regulations, plans, and guidelines that are applicable to the proposed project are summarized below.

State

California Scenic Highway Program

The California Scenic Highway Program, which is maintained by the California Department of Transportation (Caltrans), protects scenic state highway corridors from changes that would diminish the aesthetic value of lands adjacent to these highways. The roadways in the project area that are designated state scenic highways are discussed under Section 5.1.1.2, *Existing Conditions*, "Scenic Highways."

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 and most recently revised in 2016 (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. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. Title 24 requires outdoor lighting controls to reduce energy usage; in effect, this reduces outdoor lighting.

Nighttime Sky, CCR Title 24, Outdoor Lighting Standards

The California legislature passed a bill in 2001 requiring the California Energy Commission to adopt energy efficiency standards for outdoor lighting, both public and private. In November 2003, the commission adopted changes to the California Code of Regulations, Title 24, 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

Los Angeles County General Plan

The Los Angeles County General Plan (Los Angeles County 2015) addresses, among other topics, visual and scenic resources. The Conservation and Natural Resources Element addresses the following that may be applicable to the project:

- Policy C/NR 13.3: Reduce light trespass, light pollution and other threats to scenic resources.
- Policy C/NR 13.4: Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.
- Policy C/NR 13.5: Encourage required grading to be compatible with the existing terrain.

5.1.1.2 EXISTING CONDITIONS

Visual Character

The project site is fully developed and consists of outdoor athletic features that support the larger high school campus. The project's surrounding vicinity is urban and is fully developed with residential, educational, and commercial uses. As discussed in the Initial Study to this DEIR, the project site does not contain unique visual features that would distinguish it from surrounding areas nor is it located within a designated scenic vista. Trees and shrubs at Crescenta Valley HS are ornamental and not known to hold any special importance as noteworthy visual assets.

Landform

The project site and surrounding immediate vicinity are largely flat with an elevation of approximately 1,460 feet above mean sea level (amsl) on the eastern end and approximately 1,458 feet asml on the western end (USGS 2019).

Scenic Vistas and Corridors

The nearest scenic areas in the vicinity are the Verdugo Mountains Open Space Preserve, approximately 0.5 miles to the southwest, and the Angeles National Forest, approximately 1.25 miles to the northeast. Views from the project site to scenic areas (i.e., ridgelines and mountains) are limited and obstructed by the surrounding urban environment.

Light and Glare

Because it is in an urban environment, the project site and its immediate vicinity contain many existing sources of nighttime illumination. Under existing conditions, nighttime lighting on the Crescenta Valley HS campus primarily include security lighting along pathways and building exteriors. The existing basketball and tennis

courts to the north of the project site are illuminated by 14 light poles. There is no nighttime lighting installed on the existing athletic fields. Off-site lighting sources includes street lighting, exterior lighting on existing residential and institutional uses. Additional ambient light in the area is generated by surrounding neighborhoods and the Interstate (I-210) to the south.

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.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold AE-2
- Threshold AE-3

These impacts will not be addressed in the following analysis.

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 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 5.1-1.

Table 5.1-1 General Light Levels Benchmark

Outdoor Light	Foot-Candles
Direct Sunlight	10,000
Full Daylight	1,000
Overcast Day	100
Dusk	10
Twilight	1
Deep Twilight	0.1
Full Moon	0.01
Quarter Moon	0.001
Moonless Night	0.0001
Overcast Night	0.00001
Gas station canopies	25–30
Typical neighborhood streetlight	1.0–5.0

Source: NOAO 2020.

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.

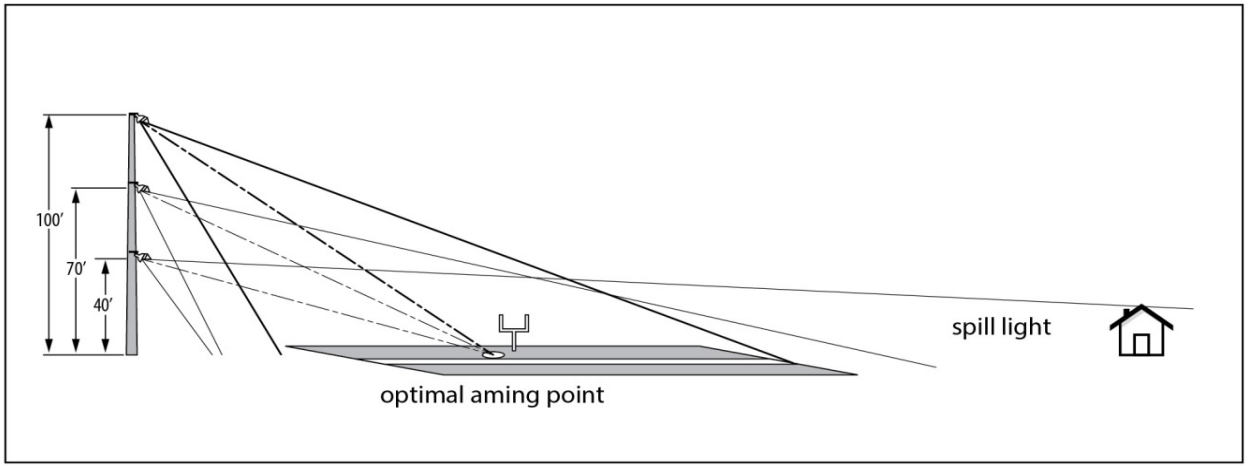
Luminaire ("light fixture"). The complete lighting unit (fixture) consists of a lamp—or lamps and ballast(s)—and the parts that distribute the light (reflector, lens, diffuser), position and protect the lamps, and connect the lamps to the power supply. An important component of luminaires is their shielding:

- ***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.

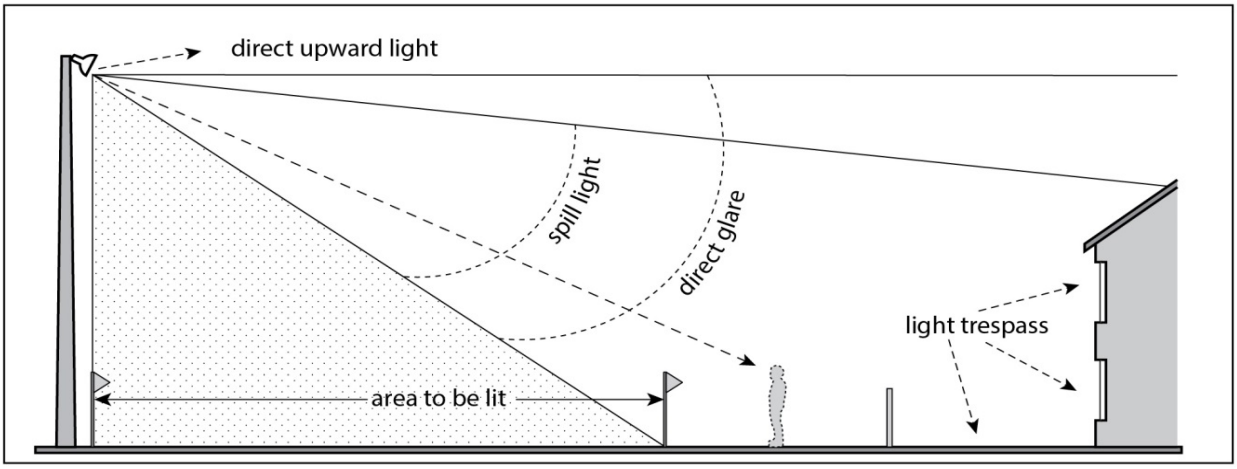
Light trespass. Spill light that, because of quantitative, directional, or type of light, causes annoyance, discomfort, or loss in visual performance and visibility. Light trespass is light cast where it is not wanted or needed, such as light from a streetlight or a floodlight that illuminates someone's 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 Illustration AE-1*, Light Trespass*, below, adapted from Musco Sports Lighting, LLC. (Musco Lighting) (Musco Lighting 2015).

Illustration AE-1. Light Trespass



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 Illustration AE-2, *Glare*, below, adapted from Institution of Lighting Engineers (ILE 2003).

Illustration AE-2. Glare



The District recognizes that 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. In order to determine appropriate lighting standards that reflect the existing lighting conditions, land uses are categorized into four lighting zones (IES 2003):

- **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, and it is mostly uniform and/or continuous. After curfew, lighting may be extinguished or reduced in some areas as activity levels decline.

The project site is identified as LZ3 based on population figures from the 2000 Census and the above IES lighting zone description.

Proposed Lighting System

As discussed in Chapter 3 of this DEIR, the proposed project would result in the installation of permanent bleachers, field lighting around the existing track and field, restroom and storage/maintenance buildings, a team room, and a concession stand within the existing track and field site. The bleachers would have seating capacity for 3,442, would be 248 feet long and 58 feet high, and would be located along the northern perimeter of the existing track and field. The four field lights would be provided for evening practices and home games, with each light pole being approximately 100 feet in height along the perimeter of the running track. The school's use of the proposed field would be from 7:00 am to 10:00 pm Monday through Friday, and 8:00 am to 10:00 pm on Saturday. Lighting would not be used past 10:00 pm. Use of the proposed field lighting by outside groups would require a facilities use permit issued by GUSD, similar to existing conditions, that would establish the allowable hours of use.

Figure 3-4, *Project Site Plan*, illustrates the location of the proposed field lighting fixtures on the project site. Each light pole would be mounted with up to 12 light fixtures using 1,430-watt Musco TLC-LED-1500 lamps and equipped with external glare control visors. The new light poles would provide an average of 51.8 foot-candles across the field, which is the lighting standard for high school sports safety set by the Illuminating Engineering Society (IES) and the California Interscholastic Federation (CIF) field lighting recommendations. The lighting would also be designed to reduce illumination levels to zero at the site perimeter. By utilizing the Musco lighting control systems and LED lights, the proposed lighting can be controlled to direct the light in a more precise manner onto the field compared to typical floodlights.

The analysis below was performed using a photometric study and view simulations of the proposed light system. The photometric study was prepared by Musco Lighting based on an engineered design layout that included the programmed four 100-foot-tall poles, each with 12 lights: 10 lights in a horizontal configuration across the top of each pole and two ball tracking 'up' lights placed at 16 feet from the base of each pole. The photometric study serves as a blueprint for the anticipated light levels both on and off the proposed project site by calculating the amount of light that will fall on an object based on the output and angle of the fixture(s). Based on this design configuration, the light levels were calculated for the center of the proposed playing field and at the Crescenta Valley HS property line boundaries.

To further evaluate the potential for project lighting to affect surrounding sensitive land uses, nighttime visual simulations were prepared. In creation of the visual simulations. PlaceWorks modeled the proposed improvements using AutoCAD files of the site plan. The 3D model was imported into AutoDesk MdsMax to verify accurate dimensions and massing of modeled lighting for the proposed project from the files received from Musco Lighting. Once verification of model size was confirmed, the view simulations were created in Adobe Photoshop. These simulations are intended to provide a photo realistic rendering of the proposed project upon completion.

5.1.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.1-1: The proposed project would have a substantial adverse effect on a scenic vista. [Thresholds AE-1]

Impact Analysis:

Scenic vista is generally considered a viewpoint that provides expansive views of a highly-valued landscape for the benefit of the general public. Some scenic vistas are officially designated by public agencies, or informally designated by tourist guides. Vistas provide visual access or panoramic views to a large geographic area and are generally located at a point where surrounding views are greater than one mile away. Panoramic views are usually associated with vantage points over a section of urban or natural areas that provide a geographic orientation not commonly available. Examples of panoramic views might include an urban skyline, valley, mountain range, a large open space area, the ocean, or other water bodies. A substantial adverse effect to a scenic vista is one that degrades the view from such a designated view spot.

The project site is fully developed with an existing high school campus, athletic fields, on-site parking and ancillary educational uses. The project's surrounding vicinity is urban and fully developed with residential, commercial, and educational uses. Additionally, the southern end of the project site is directly bounded by the I-210. The nearest scenic areas in the vicinity are the Verdugo Mountains Open Space Preserve, approximately 0.5 miles to the southwest, and the Angeles National Forest, approximately 1.25 miles to the northeast.

Partial views of the Angeles National Forest and the Verdugo Mountains are afforded to motorists traveling on the north-south oriented Ramsdell Avenue, which forms the eastern boundary of Crescenta Valley HS. The proposed project would not introduce visual obstructions that would affect motorists or passerby traveling on this roadway, as views from the project site and these scenic areas are limited and obstructed by the surrounding urban environment. Additional, views from the south beyond I-210 would not be obstructed by the project elements (permanent bleachers, new field lighting, and other stadium facilities).

Moreover, the project site does not contain unique visual features that would distinguish it from surrounding areas nor is it located within a designated scenic vista as identified in the Los Angeles County General Plan Conservation and Natural Resources Element (LADRP 2015). Therefore, the proposed project would not have a substantial adverse impact to scenic vistas and impacts would be less than significant.

Level of Significance Before Mitigation: Impacts would be less than significant.

Impact 5.1-2: Operation of the proposed project would generate new source of substantial light or glare which would adversely affect nighttime views in the area. [Threshold AE-4]

Impact Analysis:

Light Trespass Impact

Although the County's Code of Ordinance does not identify a maximum amount of illumination that can be generated by institutional uses, it defines an unacceptable level of light trespass of 0.5 foot-candle or greater when the light trespass falls onto an adjoining public right-of-way or an adjoining residentially-zoned lot, open space-zoned lot, or agriculturally-zoned lot. Therefore, GUSD has adopted the 0.5 foot-candle at the property line as the threshold for impact for the proposed project.

The proposed 100-foot-tall light poles provide the minimum height required to effectively illuminate the field area with an average maximum of 51.8 foot-candles (fc). It is not possible to completely eliminate spillover of light and glare onto adjoining properties and roadways, 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 design area. Lower mounting heights increase the spill light beyond the property boundaries. Lower mounting heights make bright parts of the floodlights more visible from positions outside the property boundary, which can increase glare.

As shown in Figure 5.1-1, *Proposed Field Illumination Summary*, light levels from the four 100-foot tall light poles would have an average minimum light level of 50 foot-candles along any horizontal surface of the improved track and field. The figure illustrates horizontal spill light levels in foot-candles on a 30-foot by 30-foot grid. As described above, horizontal foot-candles represent the light level received on a horizontal surface such as a sports field, roadway, or parking lot pavement. As shown, the proposed system provides intended lighting levels on the field, with spill light dissipating away from the from the playing surface.

Figures 5.1.-2a to 5.1-2d illustrate the amount of light trespass at the Crescenta Valley HS property line with implementation of the proposed project. As shown in Figure 5.1-2a, *Proposed Field Illumination Summary-Off-Site (Mayfield)*, and Figure 5.1-2b, *Proposed Field Illumination Summary-Off-Site (Ramsdell)*, light spillover during lighted game events along Mayfield Avenue and Ramsdell Avenue would not reach levels above 0.5 foot-candles and no adverse impacts would occur. However, as shown in Figure 5.1-2c, *Proposed Field Illumination Summary-Offsite (I-210)*, and Figure 5.1-2d, *Proposed Field Illumination Summary-Offsite (Residential),* light levels from the proposed field lighting during lighted game events would approach 0.98 and 0.77 foot-candle on the I-210 and neighboring property consisting of residential uses, respectively. Light levels would exceed the 0.5 foot-candle threshold and the project would result in new lighting that would intrude on neighboring residential uses and could affect nighttime views during lighted game events (not on a nightly basis). This would be a potentially significant impact.

To further evaluate the potential for project lighting to affect surrounding sensitive land uses, nighttime visual simulations were prepared. Per CEQA requirements, the evaluation of potential visual impacts of a project on private vantage points (e.g. single-family or multi-family residential uses) is generally not required. Evaluation

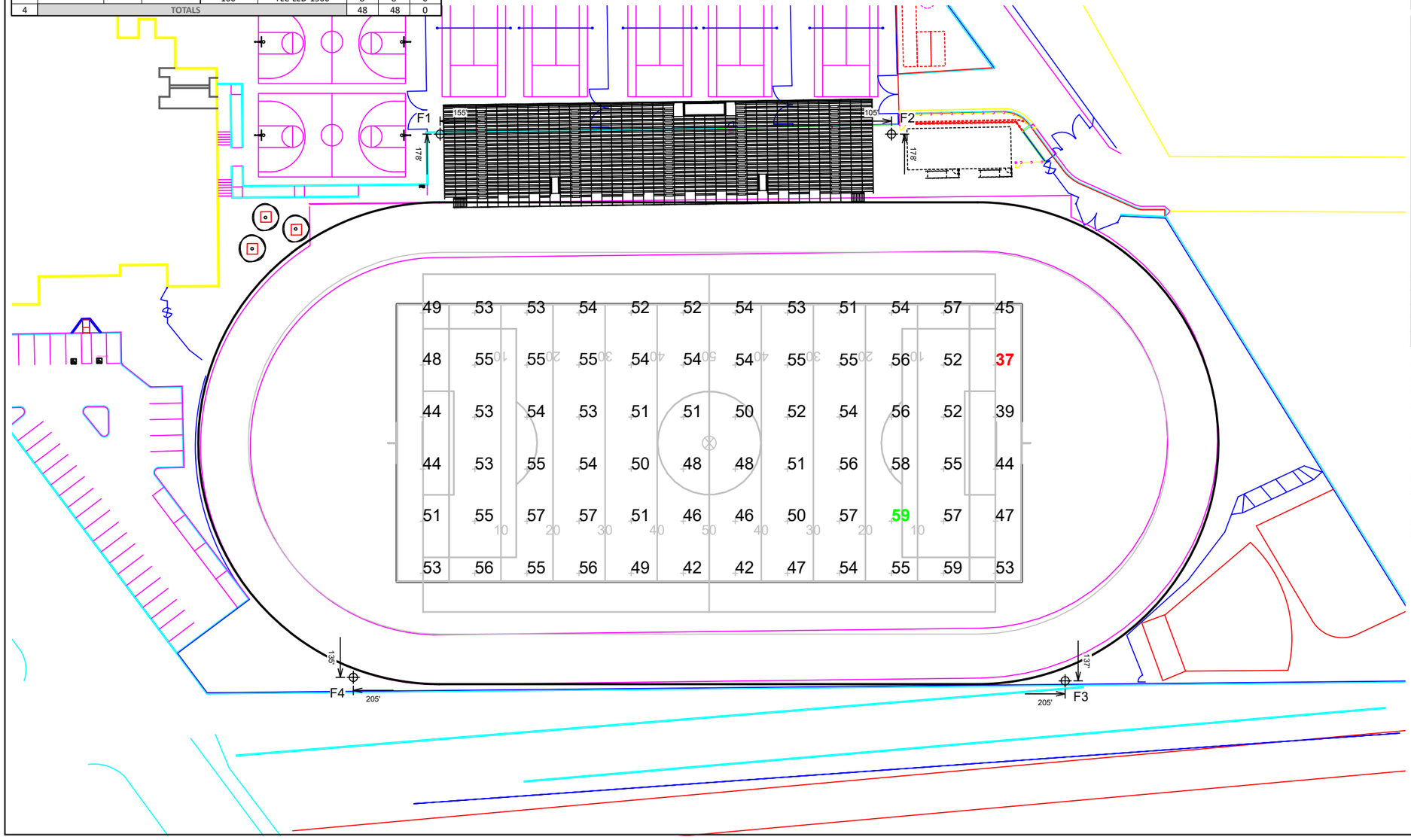
of such impacts is instead focused on potential effects on public views (e.g., from public roadways). The three view simulations prepared for the proposed project are shown in Figures 5.1-3 through 5.1-5. The potential light impacts of the proposed project are described below.

Figure 5.1-1 - Proposed Field Illumination Summary

5. Environmental Analysis

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



GRID SUMMARY

Name:	**Football**
Size:	360' x 160'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Guaranteed Average:	**50**
Scan Average:	51.83
Maximum:	59
Minimum:	37
Avg / Min:	1.42
Guaranteed Max / Min:	**2**
Max / Min:	1.61
UG (adjacent pts):	1.43
CU:	0.53
No. of Points:	72

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	160,000 / 52,000 / 89,600 lumens
No. of Luminaires:	**48**
Total Load:	58.56 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

0 65
Scale (Feet)

Source: MUSCO, 2020

5. Environmental Analysis
AESTHETICS

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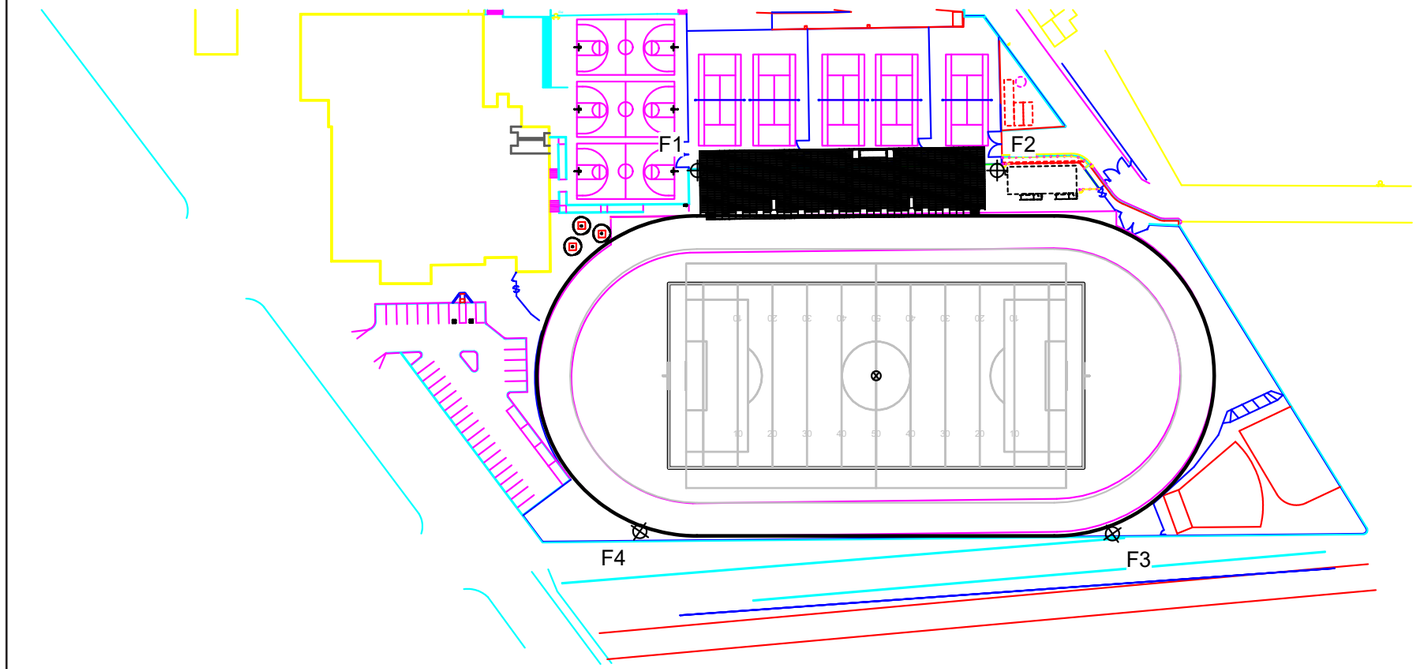
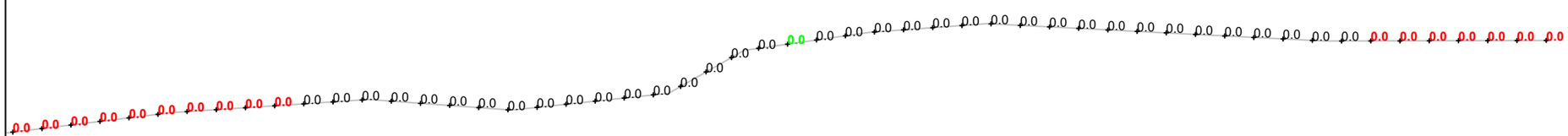
Figure 5.1-2a - Proposed Field Illumination Summary-Offsite (Mayfield)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0





GRID SUMMARY

Name:	**Spill @ Mayfield Ave**
Spacing:	30.0'
Height:	-41.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.0039**
Maximum:	0.03
Minimum:	0.00
No. of Points:	54

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	160,000 / 52,000 / 89,600 lumens
No. of Luminaires:	**48**
Total Load:	58.56 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

0 150
Scale (Feet)

Source: MUSCO, 2020

5. Environmental Analysis
AESTHETICS

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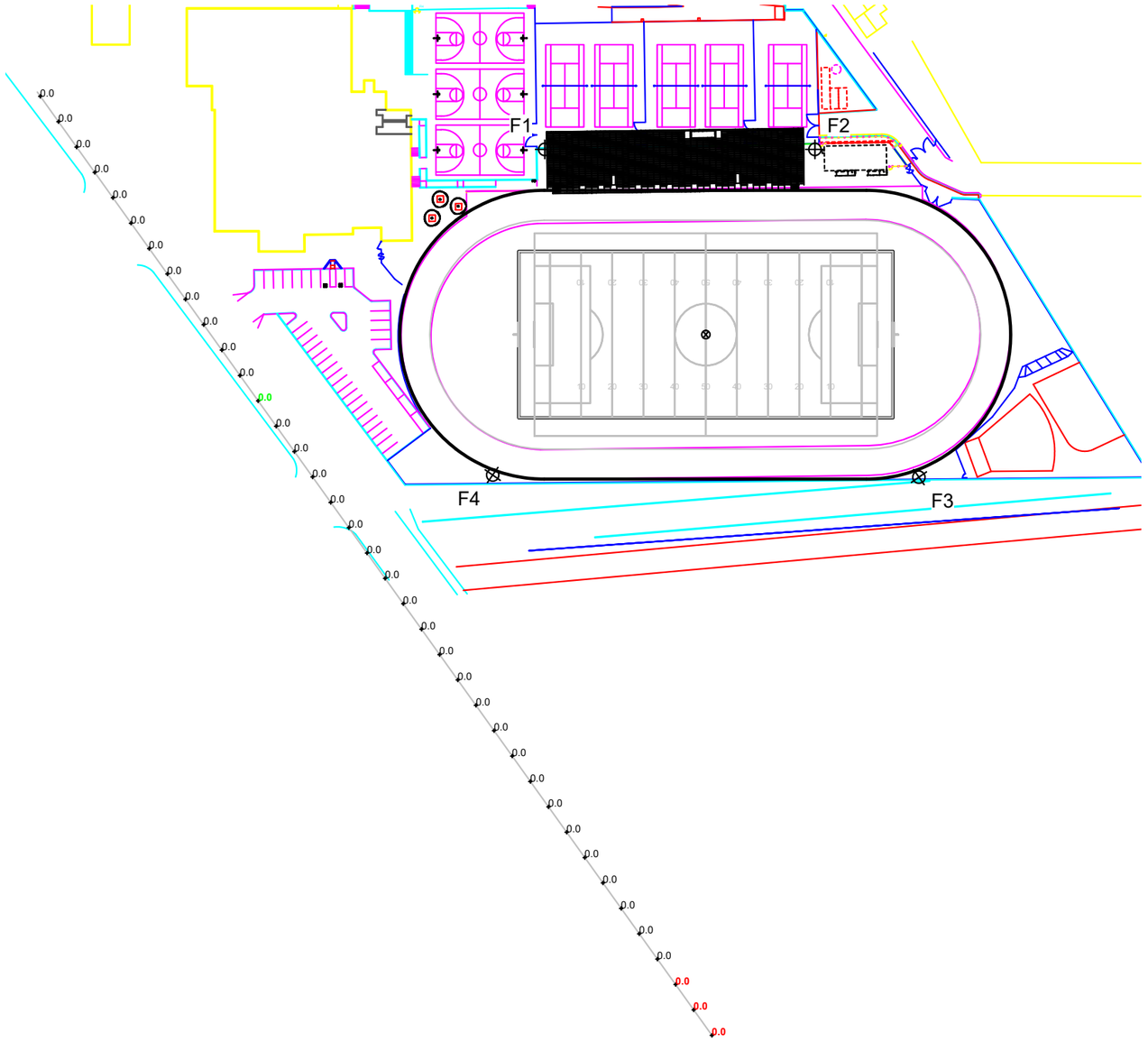
Figure 5.1-2b - Proposed Field Illumination Summary-Offsite (Ramsdell)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



GRID SUMMARY

Name:	**Spill @ Ramsdell Ave**
Spacing:	30.0'
Height:	-14.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.0023**
Maximum:	0.01
Minimum:	0.00
No. of Points:	38

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	160,000 / 52,000 / 89,600 lumens
No. of Luminaires:	**48**
Total Load:	58.56 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

0 150
Scale (Feet)

Source: MUSCO, 2020

5. Environmental Analysis
AESTHETICS

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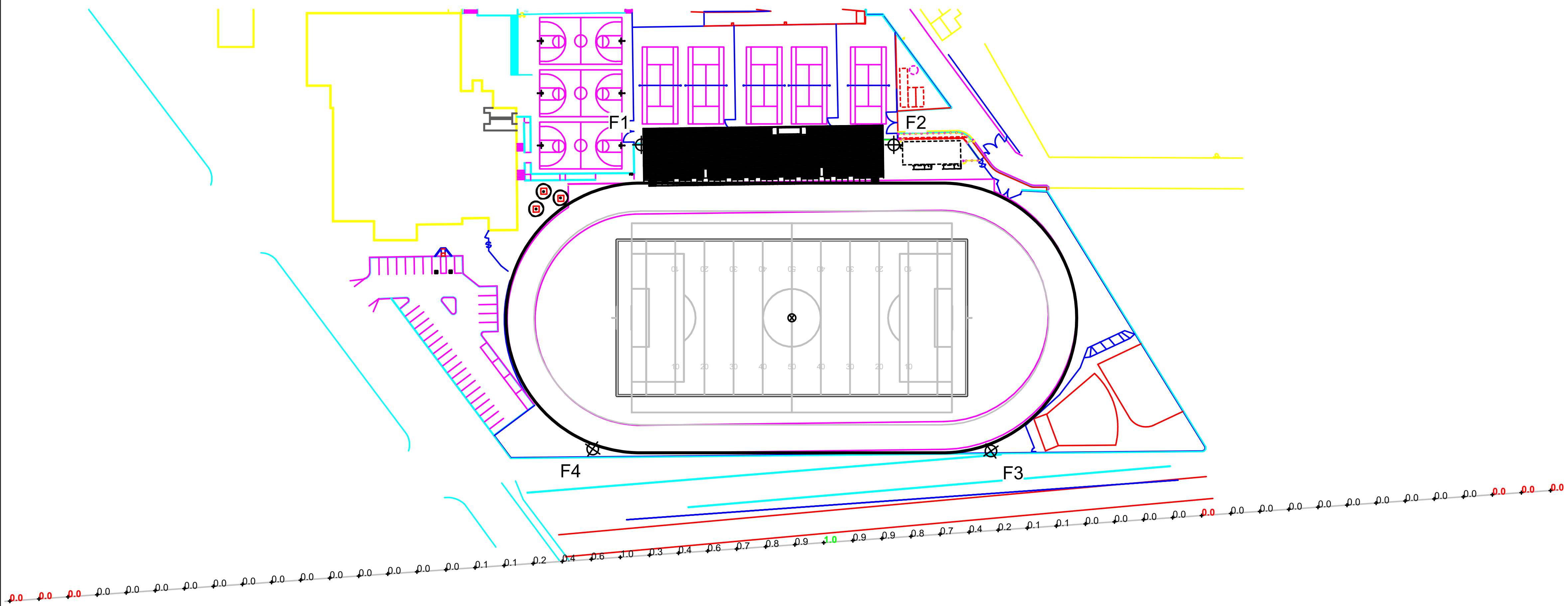
Figure 5.1-2c - Proposed Field Illumination Summary-Offsite (I-210)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



GRID SUMMARY

Name:	**Spill @ I-210**
Spacing:	30.0'
Height:	-58.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.2103**
Maximum:	0.98
Minimum:	0.00
No. of Points:	54

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	160,000 / 52,000 / 89,600 lumens
No. of Luminaires:	**48**
Total Load:	58.56 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

0 150
Scale (Feet)

Source: MUSCO, 2020

5. Environmental Analysis
AESTHETICS

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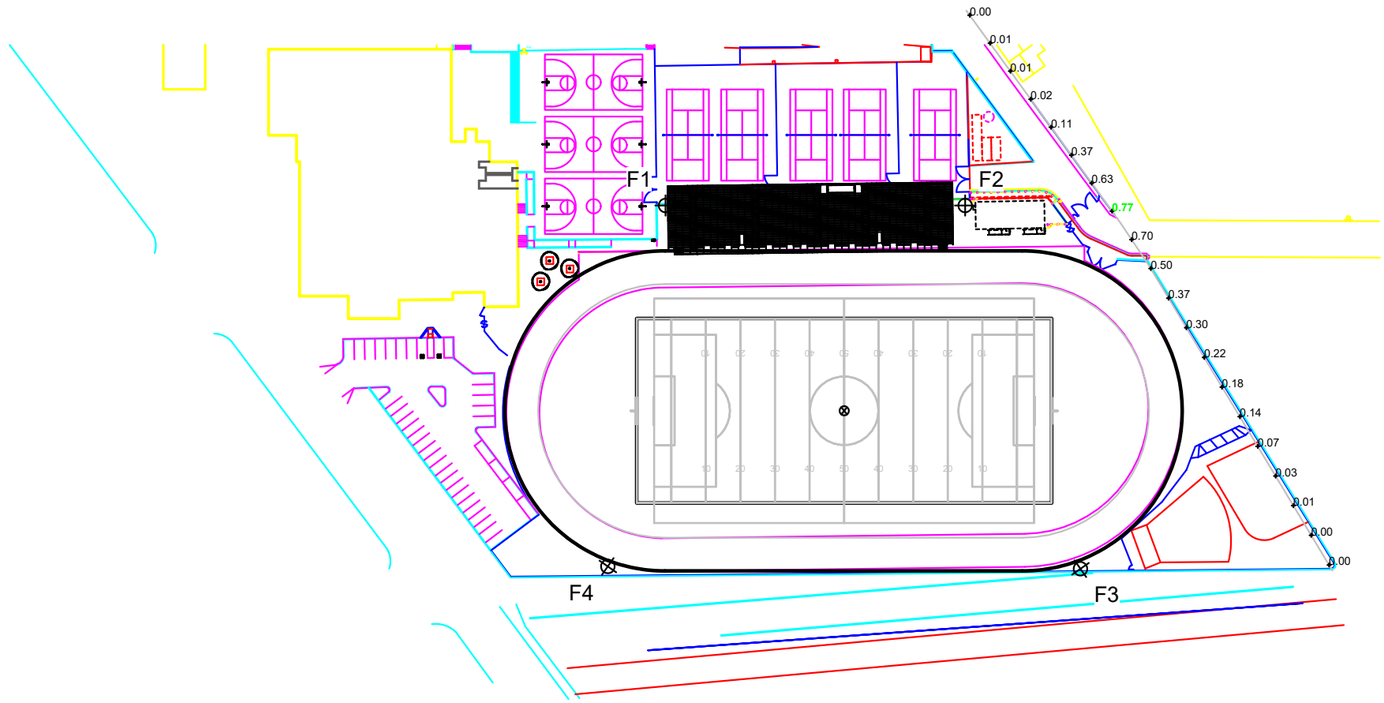
Figure 5.1-2d - Proposed Field Illumination Summary-Offsite (Mayfield)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



GRID SUMMARY

Name:	**Residential Spill**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.2217**
Maximum:	0.77
Minimum:	0.00
No. of Points:	20

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	160,000 / 52,000 / 89,600 lumens
No. of Luminaires:	**48**
Total Load:	58.56 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

0 150
Scale (Feet)

Source: MUSCO, 2020

5. Environmental Analysis
AESTHETICS

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View 1

As shown in Figure 5.1-3, *View Simulation, View 1*, View 1 looks eastwardly towards the project site from Altura Avenue. Figure 5.1-3 shows the project site under existing conditions and under implementation of the proposed project at night. Under the proposed project, three proposed light poles are visible: two next to the bleachers and one on the southwestern corner of the project site. Due to their height above other vertical visual elements (single-family homes and trees), nighttime light from the poles is visible. However, the proposed light fixtures clearly direct this light downward and the track and field is also clearly lit in View 1. There would be a noticeable increase in nighttime light from this vantage point during evening use from the proposed field improvements. As described above, the proposed field lighting would result in light levels of 0.77 foot-candles along the property line. This increase is considered potentially significant.

View 2

As shown in Figure 5.1-4, *View Simulation, View 2*, View 2 looks westward towards the project site from Altura Avenue. Under the proposed project, three proposed light poles are visible: two on the southern boundary of the project site and the top of one of the light next to the bleachers. Due to their height above other vertical visual elements (school buildings and trees), nighttime light from the poles is visible. However, due to its distance from the project site, the residential neighborhood with a View 2 vantage point would not experience direct light from the project site shining in windows or on outdoor spaces. While some homes, such as those on Altura Avenue would be able to see the tops of light poles on the project site when looking to the east at night, due to the distance from the lights, landscaping and residential uses, as well as the downward orientation of the proposed lighting system, the lights would not intrude on residential uses at this vantage point.

View 3

As shown in Figure 5.1-5, *View Simulation, View 3*, View 3 looks westward towards the project site from Encinal Avenue. Under the proposed project, all proposed light poles are visible. Due to the topography of the area (the project site is located at a raised level), nighttime lighting from the poles is visible. However, due to its distance from the project site, the residential neighborhood with a View 3 vantage point would not experience direct light from the project site shining in windows or on outdoor spaces. While some homes, such as those on Encinal Avenue would be able to see the light poles on the project site when looking to the east at night, due to the distance from the lights, landscaping and residential uses, as well as the downward orientation of the proposed lighting system, the lights would not intrude on residential uses at this vantage point.

5. Environmental Analysis
AESTHETICS

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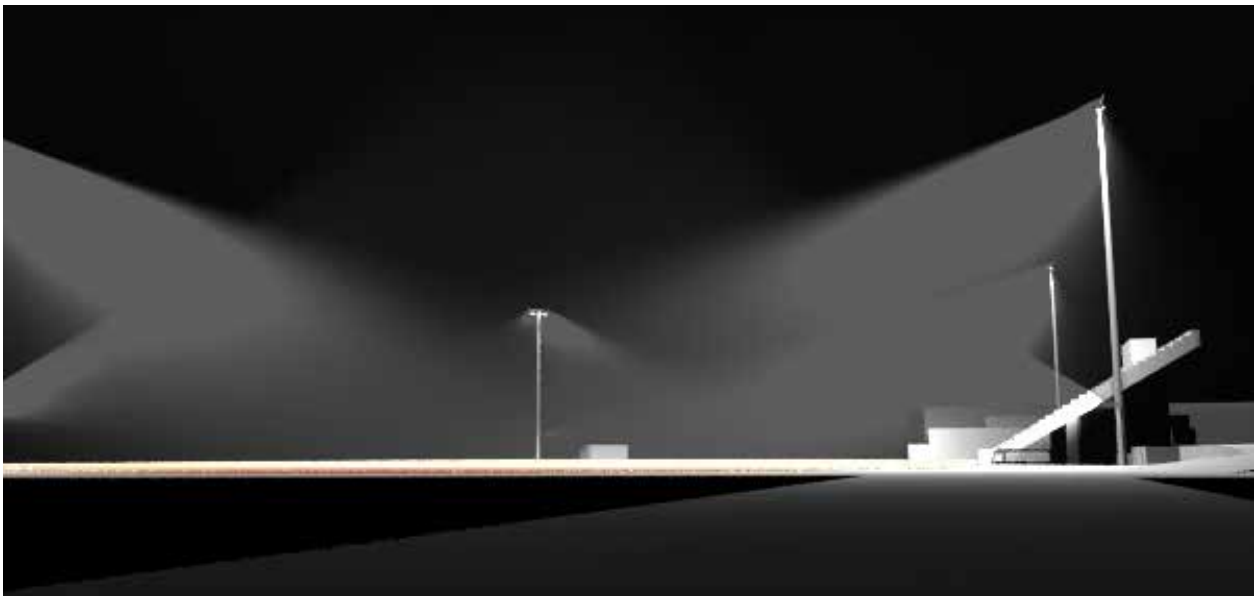
Figure 5.1-3 - View Simulation, View 1
5. Environmental Analysis



Altura Ave
(East Side of School)

5. Environmental Analysis
AESTHETICS

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Figure 5.1-4 - View Simulation, View 2
5. Environmental Analysis

Altura Ave
(West Side of School)

5. Environmental Analysis
AESTHETICS

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Figure 5.1-5 - View Simulation, View 3
5. Environmental Analysis

Encinal Ave
(West Side of School)

5. Environmental Analysis
AESTHETICS

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Generation of Glare

Field lighting would include high intensity lamps, which, if not installed properly, could cause glare impacts for people in the residential areas. The design elements for glare control include mounting height, visors and shielding, and reflective housing around the lamp. The proposed lighting incorporates all of these elements, and each element can be arranged individually to control and minimize any potential glare impacts. The luminaires are equipped with large hoods and shields and are specially designed to direct the light onto the track and field with minimum glare. Precise position of the fixtures, accurate focusing of the light beams, and the shielding of the arc of the beams would eliminate glare impacts at surrounding residential uses and roadways. 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. Therefore, glare impacts would be less than significant.

Conclusion

Consistent with the County's Code of Ordinance, the proposed lighting system directs light "away from adjacent properties and public rights of way." As discussed above, the proposed lighting system—when in use—would generate additional sources of light that would be visible from surrounding streets and land uses (including residential neighborhoods). However, the project site is in an urbanized environment with a variety of existing sources of nighttime illumination; most views toward the project site feature an existing glow produced by building lights, street lights, traffic, and other elements of the urban context. Furthermore, there are no windows or outdoor spaces (e.g., yards) that would be expected to experience direct light overspill from the proposed light poles. Although the poles would be 100-feet-tall, they would face downward and would not be used past 10:00 p.m. However, implementation of the proposed project would result in light levels along the norther property line to exceed the County's 0.5 foot-candle threshold, and impacts of the proposed project would be potentially significant.

Level of Significance Before Mitigation: Impacts would be potentially significant.

5.1.4 Cumulative Impacts

The list of related projects analyzed by this DEIR for cumulative projects is provided in Chapter 4 (see Table 4-1). Light and glare impacts, like many other aesthetic impacts, are generally area-specific. None of the related projects in Table 4-1, *Cumulative Projects*, are close enough to the project site to generate cumulatively-considerable light and glare impacts. The closest cumulative projects to the project site are construction of accessory dwelling units to the existing single-family houses. Therefore, the proposed project would not combine with other projects to generate significant cumulative adverse impacts related to light and glare.

5.1.5 Level of Significance Before Mitigation

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

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

- Impact 5.1-2: The proposed field lighting would result in lighting levels that exceed the County's threshold.

5.1.6 Mitigation Measures

Impact 5.1-2

AE-1 The Glendale Unified School District shall minimize the effects of new sources of nighttime lighting by incorporating the following measures into project design and operation:

- All lighting shall be shielded and directed downward onto the athletic fields to minimize potential light escape and/or spillover onto adjacent properties.
- The new athletic field lights shall be shall shut off automatically at 10:00 p.m.

5.1.7 Level of Significance After Mitigation

Although mitigation measures MM-AES-1 would reduce light and glare impacts, such impacts would remain significant and unavoidable, as light levels would exceed the County's 0.5 foot-candle threshold.

5.1.8 References

California Energy Commission (CEC). 2018. "Lighting Zone Characteristics and Rules for Amendments by Local Jurisdictions." Table 10-114 A of the 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. https://ww2.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf.

Illuminating Engineering Society (IES). 2011. *Model Lighting Ordinance: User's Guide.* http://www.ies.org/PDF/MLO/MLO_FINAL_June2011.pdf.

Institution of Lighting Engineers (ILE). 2003, May. Guidance Notes for the Reduction of Light Pollution. https://www.gov.je/SiteCollectionDocuments/Planning%20and%20building/SPG%20Lightpollution%202002.pdf.

Los Angeles County Department of Regional Planning (LADRP). 2015, October 6. General Plan. http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan.pdf.

Musco Lighting. 2020, April. Lighting Report for Crescenta Valley HS FB. [DEIR Appendix B]

National Optical Astronomy Observatory (NOAO). 2020. Recommended Light Levels. https://www.noao.edu/education/QLTkit/ACTIVITY_Documents/Safety/LightLevels_outdoor+indoor.pdf.

5.2 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Crescenta Valley High School Field Improvement project (proposed project) 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. Criteria air pollutant emissions modeling for the proposed project is included in Appendix C of this DEIR. Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB).

5.2.1 Environmental Setting

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 (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. VOC and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and its known health effects is presented below.

- **Carbon Monoxide** is a colorless, odorless 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. 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 (SCAQMD 2005; USEPA 2020). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2018).

- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_X produced by combustion is NO, but NO reacts quickly with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant and more injurious than NO in equal concentrations. 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 NO_2 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 NO_2 concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (South Coast AQMD 2005; USEPA 2020). The SoCAB is designated an attainment area for NO_2 under the National and California AAQS (CARB 2018).

- **Sulfur Dioxide** 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 SO_2. When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO_2, 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, SO_2 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 (SCAQMD 2005; USEPA 2020). The SoCAB is designated attainment under the California and National AAQS (CARB 2018).

- **Suspended Particulate Matter** 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 PM_{10}, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. 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 far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (SCAQMD 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., ≤0.1 millionths of a meter or <0.000004 inch), 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 (SCAQMD 2013). However, the EPA and the California Air Resources Board (CARB) have not adopted AAQS to regulate these particulates. Diesel particulate matter is

classified by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[1] environmental damage,[2] and aesthetic damage[3] (SCAQMD 2005; USEPA 2020). The SoCAB is a nonattainment area for $PM_{2.5}$ under California and National AAQS and a nonattainment area for PM_{10} under the California AAQS (CARB 2018).[4]

- **Ozone**, or O_3, is a key ingredient of "smog" and is a gas that is formed when VOCs and NO_X, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (SCAQMD 2005; USEPA 2020). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2018).

- **Volatile Organic Compounds** 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 (SCAQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O_3, South Coast AQMD has established a significance threshold. The health effects for ozone are described above.

- **Lead** 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 (SCAQMD 2005; USEPA 2020). The major sources of lead emissions have historically been mobile and industrial sources.

[1] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

[2] Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

[3] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

[4] CARB approved the South Coast AQMD's request to redesignate the SoCAB from serious nonattainment for PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM_{10} standards from 2004 to 2007. The EPA approved the State of California's request to redesignate the South Coast PM_{10} nonattainment area to attainment of the PM_{10} National AAQS, effective on July 26, 2013.

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 more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[5] As a result of these violations, the Los Angeles County portion of the SoCAB is designated nonattainment under the National AAQS for lead (SCAQMD 2012; CARB 2018). 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 summarizes the potential health effects of criteria air pollutants.

Table 5.2-1 Criteria Air Pollutant Health Effects Summary

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 (NO_2)	• Increased response to allergens • Aggravation of respiratory illness	Same as carbon monoxide sources
Particulate Matter (PM_{10} & $PM_{2.5}$)	• 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 2009; SCAQMD 2005.

[5] 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 (SCAQMD 2012).

Toxic Air Contaminants

People exposed to toxic air pollutants (TACs) 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 (USEPA 2019). By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has 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 project being particulate matter from diesel-fueled engines.

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 responses and may exacerbate existing allergies and asthma (USEPA 2002).

5.2.1.1 REGULATORY BACKGROUND

AAQS 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, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized in this section.

Federal and State

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.

The 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, which are shown in Table 5.2-2. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (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.

Table 5.2-2 Ambient Air Quality Standards for Criteria Air Pollutants

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 (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	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)	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 Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	

Table 5.2-2 Ambient Air Quality Standards for Criteria Air Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	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	No Federal Standard	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	No Federal Standard	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.

Source: CARB 2016.
Notes: ppm: parts per million; µg/m^3: micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
[1] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, 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 O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 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 PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, 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 $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
[5] On June 2, 2010, a new 1-hour SO_2 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:

- **AB 1493: Pavley Fuel Efficiency Standards.** 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. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.

- **SB 1078 and SB 107: Renewables Portfolio Standards.** A major component of California's Renewable Energy Program is the renewables portfolio standard (RPS) 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.

- **California Code of Regulations (CCR), Title 20: Appliance Energy Efficiency Standards.** The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the California Energy Commission (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.

- **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 CEC) 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.[6]

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 § 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 § 7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency, 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

[6] The green building standards became mandatory in the 2010 edition of the code.

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.

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:

- **13 CCR Chapter 10 § 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 § 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 § 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

Air Quality Management Planning

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). Since 1979, a number of AQMPs have been prepared.

2016 AQMP

On March 3, 2017, South Coast AQMD adopted the 2016 AQMP as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 National 8-hour ozone standard by 2031
- 2012 National annual $PM_{2.5}$ standard by 2025[7]
- 2006 National 24-hour $PM_{2.5}$ standard by 2019
- 1997 National 8-hour ozone standard by 2023

[7] The 2016 AQMP requests a reclassification from moderate to serious nonattainment for the 2012 National $PM_{2.5}$ standard.

- 1979 National 1-hour ozone standard by year 2022

It is projected that total NO_X emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (SCAQMD 2017), which requires reducing NO_x emissions in the SoCAB to 250 tpd. This is approximately 45 percent more reduction from existing regulations for the 2023 ozone standard, and 55 percent more reduction from existing regulations to meet the 2031 ozone standard.

Reducing NO_X emissions would also reduce $PM_{2.5}$ concentrations in the SoCAB. However, because the goal is to meet the 2012 federal annual $PM_{2.5}$ standard no later than year 2025, South Coast AQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under this federal standard. A "moderate" nonattainment would require meeting the 2012 federal standard by no later than 2021.

Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (SCAQMD 2017).

Lead Implementation Plan

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead classification due to 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 State Implementation Plan (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 are subject to South Coast AQMD rules and regulations in effect at the time of activity, including:

- **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. In general, the rule prohibits new developments from the installation of wood-burning devices.

- **Rule 445, 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 VOC content of architectural coatings used on projects in the SoCAB. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the SoCAB 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.

5.2.1.2 EXISTING CONDITIONS

The proposed project site is in the SoCAB, which includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting 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 (SCAQMD 2005).

Meteorology

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 that best represents the climatological conditions of the project area is the Tujunga, California Monitoring Station (ID 049047). The average low is reported at 42.3°F in December, and the average high is 91.9°F in August (WRCC 2020).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Rainfall averages 20.83 inches per year in the vicinity of the project site (WRCC 2020).

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. Periods of heavy fog are frequent, especially along the coast. 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 (SCAQMD 1993).

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 (SCAQMD 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 (SCAQMD 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.

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

Source: CARB 2018.
[1] 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.

Multiple Air Toxics Exposure Study IV

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 2008, South Coast AQMD conducted its third update, MATES III, based on the Office of Environmental Health Hazards Assessment's (OEHHA) 2003 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health

Risk Assessments (2003 HRA Guidance Manual). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, which accounted for 84 percent of the cancer risk (SCAQMD 2008a).

South Coast AQMD recently released the fourth update, MATES IV, which was also based on OEHHA's 2003 HRA Guidance Manual. The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources, and 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome-plating facilities. The largest contributor to this risk was diesel exhaust, which accounted for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basinwide, population-weighted risk decreased by approximately 57 percent since MATES III (South Coast AQMD 2015a).

OEHHA updated the guidelines for estimating cancer risks on March 6, 2015 (OEHHA 2015). The new method uses higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined, South Coast AQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher than the risk identified in MATES IV using the 2015 OEHHA guidance methodology (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a).

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the proposed project site are best documented by measurements taken by the South Coast AQMD. The proposed project is located within Source Receptor Area (SRA) 8: West San Gabriel Valley.[8] The air quality monitoring station closest to the proposed project is the Pasadena-S Wilson Avenue Monitoring Station, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.[9] Data from this station includes O_3, NO_2, and $PM_{2.5}$ and is summarized in Table 5.2-4. Data for PM_{10} is supplemented by the Los Angeles-North Main Street Monitoring Station. 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 has exceeded the federal $PM_{2.5}$ standard.

[8] 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.

[9] 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.

Table 5.2-4 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels[1, 2]				
	2014	2015	2016	2017	2018
Ozone (O_3)[1]					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	6	12	12	18	8
State 8-hour ≥ 0.07 ppm (days exceed threshold)	13	18	18	36	19
Federal 8-Hour > 0.075 ppm (days exceed threshold)	7	7	15	25	8
Max. 1-Hour Conc. (ppm)	0.124	0.111	0.126	0.139	0.112
Max. 8-Hour Conc. (ppm)	0.096	0.084	0.090	0.100	0.090
Nitrogen Dioxide (NO_2)[1]					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.0752	0.0749	0.0719	0.0723	0.0682
Coarse Particulates (PM_{10})[1*]					
State 24-Hour > 50 µg/m^3 (days exceed threshold)	38	30	21	40	31
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. (µg/m^3)	86.8	88.5	74.6	96.2	81.2
Fine Particulates ($PM_{2.5}$)[1]					
Federal 24-Hour > 35 µg/m^3 (days exceed threshold)	0	2	0	0	0
Max. 24-Hour Conc. (µg/m^3)	32.5	48.5	29.2	22.8	32.5

Source: CARB 2018.
Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; * = Data not available
[1] Data obtained from the Pasadena-S Wilson Avenue Monitoring Station for O_3, NO_2, and $PM_{2.5}$.
[2] Data obtained from the Los Angeles-North Main Street Monitoring Station for $PM_{2.5}$.

Existing Emissions

The project site houses Crescenta Valley HS. While as of March 2020 the school has not operated as in typical years due the COVID-19 Stay at Home orders,, operations typically generate criteria air pollutant emissions from area sources, energy use, and mobile sources.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution (i.e., toxic air contaminants) 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 the 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 to the project site include residences to the southeast along Altura Avenue at 82 feet.

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.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold AQ-4

This impact will not be addressed in the following analysis.

5.2.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

CEQA allows the significance criteria established by the applicable air quality management 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 regional air quality emissions for construction activities and project operation based on substantial evidence.

Regional Significance Thresholds

South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB, shown in Table 5.2-5. The table lists thresholds that are applicable for all projects uniformly, regardless of size or scope. 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. However, the EPA and CARB have not adopted AAQS to regulate ultrafine particulate matter; therefore, South Coast AQMD has not developed thresholds for it.

Table 5.2-5 South Coast AQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/Volatile	75 lbs/day	55 lbs/day

Organic Compounds (VOCs)		
Nitrogen Oxides (NO_X)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO_X)	150 lbs/day	150 lbs/day
Particulates (PM_{10})	150 lbs/day	150 lbs/day
Particulates ($PM_{2.5}$)	55 lbs/day	55 lbs/day

Source: SCAQMD 2019.

Projects that exceed the 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 (O_3, $PM_{2.5}$)
- Increases bronchitis (O_3, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O_3)
- Reduces resistance to infections and increases fatigue (O_3)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death (O_3, $PM_{2.5}$)
- Contributes to lower birth weight in newborns ($PM_{2.5}$) (SCAQMD 2015b)

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 in Table 5.2-5 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. The thresholds are based on the trigger levels for the federal New Source Review (NSR) Program. The NSR Program was created to ensure projects are consistent with attainment of health-based federal AAQS. Regional emissions from a single project do not single-handedly 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 above. Projects that do not exceed the South Coast AQMD regional significance thresholds in Table 5.2-5 would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emissions in Table 5.2-5, emissions would cumulatively contribute to the nonattainment status and would contribute to elevating health effects associated with these criteria air pollutants. 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 further 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 since 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 above.

South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Sierra Club v. County of Fresno* (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978. Ozone concentrations are dependent upon 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 AAQS and California AAQS, it is not possible to link 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 parts per million (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 ambient air quality standards 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 the 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.[10] As identified in South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in years before redesignation were a result of unusual meteorological and topographical conditions and not of congestion at

[10] 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.

a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017).[11]

Localized Significance Thresholds

South Coast AQMD identifies localized significance thresholds (LST), shown in Table 5.2-6. Emissions of NO_2, 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.

Table 5.2-6 South Coast AQMD Localized Significance Thresholds

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)[1]	10.4 µg/m^3
24-Hour $PM_{2.5}$ Standard – Construction (South Coast AQMD)[1]	10.4 µg/m^3
24-Hour PM_{10} Standard – Operation (South Coast AQMD)[1]	2.5 µg/m^3
24-Hour $PM_{2.5}$ Standard – Operation (South Coast AQMD)[1]	2.5 µg/m^3
Annual Average PM_{10} Standard (South Coast AQMD)[1]	1.0 µg/m^3

Source: SCAQMD 2019.
ppm – parts per million; µg/m^3 – micrograms per cubic meter
[1] Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for PM_{10} and $PM_{2.5}$, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

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 tables are the localized significance thresholds 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 or not dispersion modeling may be required.

[11] 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.

The screening-level LSTs in SRA 8 are shown in Table 5.2-7. For construction activities, LSTs are based on the acreage disturbed per day based on equipment use (SCAQMD 2011) up to the project site acreage. These LSTs reflect the thresholds for receptors within 82 feet (25 meters).

Table 5.2-7 South Coast AQMD Screening-Level Localized Significance Thresholds

	Threshold (lbs/day)			
Acreage Disturbed	Nitrogen Oxides (NO_X)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
≤1.00 Acre Disturbed Per Day	69	535	4.00	3.00
1.01 Acres Disturbed Per Day	69	538	4.02	3.01

Source: South Coast AQMD 2008a and 2011.
The screening-level LSTs are based on receptors within 82 feet (25 meters) in SRA 8.

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 5.2-8 lists the TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478). However, the environmental document must analyze the impacts of environmental hazards on future users when a proposed project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects.

Table 5.2-8 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 0.5 excess cancer cases
Hazard Index (project increment)	≥ 1.0

Source: SCAQMD 2019.

5.2.3 Plans, Programs, and Policies

Plans, programs, and policies (PPP), including applicable regulatory requirements and conditions of approval for air quality impacts, are identified below.

PPP AIR-1 New buildings are required to achieve the current California Building Energy and Efficiency Standards (Title 24, Part 6) and California Green Building Standards Code (CALGreen) (Title 24, Part 11). The 2019 Building and Energy Efficiency Standards became effective January 1, 2020. The Building Energy and Efficiency Standards and CALGreen are updated

tri-annually with a goal to achieve zero net energy for residential buildings by 2020 and nonresidential buildings by 2030.

PPP AIR-2 New buildings are required to adhere to the California Green Building Standards Code (CALGreen) requirement to provide bicycle parking for new nonresidential buildings, or meet local bicycle parking ordinances, whichever is stricter (CALGreen Sections 5.106.4.1, 14.106.4.1, and 5.106.4.1.2).

PPP AIR-3 Construction activities will be conducted in compliance with California Code of Regulations Title 13 Section 2499, which requires that nonessential idling of construction equipment is restricted to five minutes or less.

PPP AIR-4 Construction activities will be conducted in compliance with any applicable South Coast Air Quality Management District rules and regulations, including but not limited to:

- Rule 403, Fugitive Dust, for controlling fugitive dust and avoiding nuisance.
- Rule 402, Nuisance, which states that a project 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."
- Rule 1113, which limits the volatile organic compound content of architectural coatings.

5.2.4 Environmental Impacts

5.2.4.1 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 of the proposed project. South Coast AQMD's *CEQA Air Quality Handbook* (Handbook) and updates on its website are intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs, and they were used in this analysis.

Air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2.25. 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). Construction criteria air pollutant emissions modeling is included in Appendix C of this Draft EIR. The calculated emissions of the project are compared to thresholds of significance for individual projects using the South Coast AQMD's Handbook. Following is a summary of the assumptions used for the proposed project analysis.

Construction would entail demolition and debris haul, grading and soil haul, trenching, construction of the proposed stadium and ancillary buildings, architectural coating, and finishing and landscaping on 1.01 acres of the approximately 4.37-acre project site. The proposed project is anticipated to be constructed over a period of 21 months, from June 2022 to March 2024. Construction air pollutant emissions are based on CalEEMod default construction durations, normalized to fit the 21-month construction schedule.

5.2.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.2-1: The proposed project is consistent with the applicable air quality management plan. [Threshold AQ-1]

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 regional emissions inventory for the SoCAB is compiled by South Coast AQMD and SCAG. Regional population, housing, and employment projections developed by SCAG are based, in part, on cities' general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP. These demographic trends are incorporated into SCAG's regional transportation plan/sustainable communities strategy to determine priority transportation projects and vehicle miles traveled in the SCAG region. The AQMP strategy is based on projections from local general plans.

Changes in population, housing, or employment growth projections have the potential to affect SCAG's demographic projections and therefore the assumptions in South Coast AQMD's AQMP. Based on the scope and nature of the project, the construction of a stadium and ancillary structures would not result in an increase in population and employment in the unincorporated community of La Crescenta. Finally, the long-term emissions generated by the proposed project would not produce criteria air pollutants that exceed the South Coast AQMD significance thresholds for 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 project would not exceed the South Coast AQMD's regional significance thresholds and growth is consistent with regional growth projections, the project would not interfere with South Coast AQMD's ability to achieve the long-term air quality goals identified in the AQMP. Therefore, the proposed project would be consistent with the AQMP and impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.2-2: Construction activities associated with the proposed project would generate short-term emissions in exceedance of South Coast AQMD's threshold criteria. [Thresholds AQ-2 and AQ-3]

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 and debris haul, grading and soil haul, trenching, building construction, architectural coating, pavement of asphalt and nonasphalt surfaces, and finishing and landscaping of the site. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change. An estimate of maximum daily construction emissions for the proposed project is provided in Table 5.2-9.

Table 5.2-9 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lb/day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 2022						
Demolition and Demolition Debris Haul	2	19	15	0	1	1
Grading and Grading Soil Haul	1	15	7	0	3	2
Utility Trenching	<1	2	3	<1	<1	<1
Building Construction 2022	2	13	14	<1	1	1
Year 2023						
Building Construction 2023	2	12	13	<1	1	1
Year 2024						
Building Construction 2024	2	12	13	<1	1	1
Architectural Coating	3	1	2	<1	<1	<1
Finishing and Landscaping	<1	1	3	<1	<1	<1
Maximum Daily Construction Emissions						
Maximum Daily Emissions	3	19	15	<1	3	2
South Coast AQMD Regional Construction Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.2.25

[1] Based on the preliminary information provided by the District. Where specific information regarding 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.

[2] 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, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

The SoCAB is designated nonattainment for O_3 and $PM_{2.5}$ under the California and National AAQS, nonattainment for PM_{10} under the California AAQS,[12] and nonattainment for lead (Los Angeles County only) under the National AAQS. According to South Coast AQMD methodology, any project that does not exceed or can be mitigated to less than the daily threshold values would not add significantly to a cumulative impact (South Coast AQMD 1993). As shown in Table 5.2-9, the maximum daily emissions for VOC, NO_x, CO, SO_2,

[12] Portions of the SoCAB along SR-60 in Los Angeles, Riverside, and San Bernardino counties are proposed nonattainment for NO_2 under the California AAQS.

PM_{10}, and $PM_{2.5}$ from construction-related activities would be less than their respective South Coast AQMD regional significance threshold values. Therefore, short-term air quality impacts from project-related construction activities would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.2-3: Long-term operation of the project would not generate emissions in exceedance of South Coast AQMD's threshold criteria. [Thresholds AQ-2 and AQ-3]

Implementation of the proposed project would improve the Crescenta Valley High School's existing athletic facilities, which would allow for varsity games that are currently held at Glendale High School to be played on-site. As a result, the proposed project would provide a closer option for stadium events for use by the school and local population. As described in Section 5.10, *Transportation*, because these are existing games and events already held at other locations in the District, project implementation would not result in an increase in vehicle miles traveled (VMT). Therefore, criteria air pollutant emissions associated with transportation emissions would not increase. Operation of the ancillary structures would result in a nominal increase in energy use. Consequently, project operations would result in an overall minimal net change in emissions from existing conditions and would not exceed the South Coast AQMD regional operation-phase significance thresholds. Projects that do not exceed the South Coast AQMD regional significance thresholds would not result in an incremental increase in health impacts in the SoCAB from project-related increases in criteria air pollutants. Therefore, impacts to the regional air quality associated with operation of the project would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.2-4: Construction activities associated with the proposed project would expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-3]

This impact analysis describes changes in localized impacts from short-term construction activities. The proposed project could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated levels. Unlike the mass of emissions shown in the regional emissions analysis in Table 5.2-9, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or $\mu g/m^3$) and can be correlated to potential health effects.

Construction-Phase LSTs

Screening-level LSTs (pounds per day) are the amount of project-related mass emissions at which localized concentrations (ppm or $\mu g/m^3$) could exceed the AAQS for criteria air pollutants for which the SoCAB is designated nonattainment. The screening-level LSTs are based on the project site size and distance to the nearest sensitive receptor and are based on the California AAQS, which are the most stringent AAQS, established to protect sensitive receptors most susceptible to respiratory distress. Table 5.2-11 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, for sensitive receptors within 82 feet (25 meters). As shown in the table, the construction of the proposed project would not generate construction-

related on-site emissions that would exceed the screening-level LSTs. Thus, project-related construction activities would not have the potential to expose sensitive receptors to substantial pollutant concentrations. Therefore, localized air quality impacts from construction activities would be less than significant, and no mitigation measures are necessary.

Table 5.2-10 Construction Emissions Compared to the Screening-Level LSTs

	Pollutants(lbs/day)[1]			
	NO_X	CO	PM_{10}[2]	$PM_{2.5}$[2]
South Coast AQMD ≤1.00 -acre LST	**69**	**535**	**4.00**	**3.00**
Utilities Trenching	2	3	0.09	0.08
Building Construction 2022	13	13	0.59	0.57
Building Construction 2023	12	13	0.51	0.50
Building Construction 2024	11	13	0.45	0.43
Architectural Coating	1	2	0.06	0.06
Finishing and Landscaping	1	3	0.07	0.06
Exceeds LST?	No	No	No	No
South Coast AQMD 1.01-Acre LSTs	**69**	**538**	**4.02**	**3.01**
Demolition and Demolition Debris Haul	17	14	1.07	0.82
Grading and Grading Soil Haul	12	6	2.60	1.55
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2016.3.2.25., and South Coast AQMD 2008b and 2011.
Notes: In accordance with South Coast AQMD methodology, only onsite stationary sources and mobile equipment occurring on the project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the site.
[1] 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.
[2] 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, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

Construction Health Risk

The OEHHA issued updated guidance for the preparation of health risk assessments in March 2015 (OEHHA 2015). It has also developed a cancer risk factor and noncancer chronic reference exposure level for DPM based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. South Coast AQMD currently does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. Emissions from construction equipment primarily consist of DPM. The project is anticipated to be developed in approximately 21 months, which would limit the exposure of on- and off-site receptors. Based on guidance from South Coast AQMD, construction risk is extrapolated based on the LST analysis. As described above, construction activities would not exceed the screening-level construction LSTs. For the reasons stated above, it is anticipated that construction emissions would not pose a threat to on- and off-site receptors, and project-related construction health impacts 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. [Threshold AQ-3]

This impact analysis describes changes in localized impacts from long-term operation of the project. The proposed project could expose sensitive receptors to elevated pollutant concentrations during operational activities if it would cause or contribute significantly to elevated levels. Unlike the mass of emissions shown in the regional emissions analysis in Table 5.2-9, which is described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or $\mu g/m^3$) and can be correlated to potential health effects.

Operational Phase LSTs

Operation of the proposed project would not generate substantial quantities of emissions from on-site, stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions require a permit from South Coast AQMD, such as chemical processing or warehousing operations where substantial truck idling could occur on-site. The proposed project does not fall within these categories of uses. Therefore, net localized air quality impacts from project-related operations 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 into 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 by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact (BAAQMD 2017). The proposed project would generate a net increase of 644 PM peak hour trips (KOA 2021), which is substantially below the incremental increase in peak hour vehicle trips needed to generate a significant CO impact. Implementation of the project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project site.

Level of Significance Before Mitigation: Less Than Significant.

5.2.5 Cumulative Impacts

In accordance with South Coast AQMD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Consistent with the methodology, projects that do not exceed the regional significance thresholds would not result in significant cumulative impacts. Cumulative projects in the local area include new development and general growth in the proposed project area. The greatest source of emissions in the SoCAB is mobile sources. Due

to the extent of the area potentially impacted by cumulative emissions (i.e., the SoCAB), South Coast AQMD considers a project cumulatively significant when project-related emissions exceed the South Coast AQMD regional emissions thresholds shown in Table 5.2-6 (South Coast AQMD 1993).

Construction

The SoCAB is designated nonattainment for O_3 and $PM_{2.5}$ under the California and National AAQS and nonattainment for PM_{10} and lead (Los Angeles County only) under the National AAQS. Construction of cumulative projects will further degrade the regional and local air quality. As shown in Table 5.2-9, project-related construction activities would not generate short-term emissions that would exceed the South Coast AQMD regional emissions thresholds. Therefore, the proposed project's contribution to cumulative air quality 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 threshold values is not considered by South Coast AQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. Because implementation of the project would provide a closer option for stadium events, it would not increase VMT and related mobile emissions. Operation of the proposed project would not result in emissions in excess of the South Coast AQMD regional emissions thresholds. Therefore, the proposed project's contribution to cumulative air quality impacts would not be cumulatively considerable.

5.2.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.2-1, 5.2-2, 5.2-3, 5.2-4, and 5.2-5.

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5. Environmental Analysis
AIR QUALITY

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5.3 ENERGY

This section presents a summary of the proposed project's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the project's energy implications, are discussed in Chapter 3, *Project Description*, and Sections 5.2, *Air Quality*, 5.3, *Greenhouse Gas Emissions*, and 5.10, *Transportation*. This section also relies on the results of a CalEEMod estimation of fuel for construction found in Appendix C of this DEIR.

5.3.1 Environmental Setting

5.3.1.1 REGULATORY BACKGROUND

Federal

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 2019).

State

Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) was established in 2002 under SB 1078 and was amended in 2006, 2011, and 2018. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. The California Public Utilities Commission is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the state. Based on the 3rd quarter 2016 report, the three largest retail energy utilities provided an average of 27.6 percent of their supplies from renewable energy sources. Since 2003, 15,565 megawatts (MW) of renewable energy projects have started operation (CPUC 2016). SB 350 (de Leon) was signed into law 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 set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures. Senate Bill 100 (de Leon) passed in 2018 puts California on the path to 100 percent fossil-fuel-free electricity by the year 2045 (CEC 2017a).

State Alternative Fuels Plan

Assembly Bill 1007 requires the California Energy Commission (CEC) to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with the California Air Resources Board (CARB) and in consultation with other federal, state, and local agencies to reduce petroleum consumption; increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen); reduce greenhouse gas (GHG) emissions; and increase in-state production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels; result in significant improvements in the energy efficiency of vehicles; and reduce trips and vehicle miles traveled through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (AB 118, Statutes of 2007) proactively implements this plan (CEC 2007).

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations (Cal. Code Regs. Title 20, Parts 1600–1608) contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California. These standards are updated regularly to allow consideration of new energy efficiency technologies and methods (CEC 2017b).

Title 24, Part 6, Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (Cal. Code Regs. Title 24, Part 6). 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 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less (CBSC 2019a). The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; and 4) nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards—CALGreen (Cal. Code Regs. Title 24, Part 11)—as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. The mandatory provisions of CALGreen became effective January 1, 2011. On October 3, 2018, the CEC adopted the voluntary standards of the 2019 CALGreen, which become effective January 1, 2020.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impacts during and after construction. CALGreen has requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency (CBSC 2019b).

5.3.1.2 EXISTING CONDITIONS

Electricity

Electricity is quantified using kilowatts (kW) and kilowatt-hours (kWh). A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the CEC's "Tracking Progress" regarding statewide energy demand, total electric energy usage in California was 288,613 gigawatt hours in 2017 (CEC 2018c). A gigawatt is equal to one billion (10^9) watts or 1,000 megawatts (1 megawatt = 1,000 kW).

The electricity supply for the unincorporated community of La Crescenta is provided by Southern California Edison (SCE). Total electricity consumption in SCE's service area in gigawatt-hours (GWh) was 104,406 GWh in 2018 (CEC 2020a). Sources of electricity sold by SCE in 2018, the latest year for which data are available, were:

- 36 percent renewable, consisting mostly of solar and wind
- 4 percent large hydroelectric
- 17 percent natural gas
- 6 percent nuclear
- 37 percent unspecified sources, that is, not traceable to specific sources (SCE 2019)

Natural Gas

Gas is typically quantified using the "therm," which is a unit of heat energy equal to 100,000 British thermal units (BTU) and is the energy equivalent of burning 100 cubic feet of natural gas. The Southern California Gas Company (SCGC) provides natural gas to the project site. SCGC's service area spans much of the southern half of California, from Imperial County on the southeast to San Luis Obispo County on the northwest to part of Fresno County on the north to Riverside County and most of San Bernardino County on the east (CEC 2020b). Total natural gas supplies available to SoCalGas for years 2020 through 2035 are 3,775 million cubic feet per day. Total natural gas consumption in SoCalGas's service area is forecast to be 2.566 billion cubic feet per day in 2020 and 2.313 billion cubic feet per day in 2035 (CGEU 2018).

5.3.2 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.

5.3.3 Environmental Impacts

5.3.3.1 METHODOLOGY

The impact analysis focuses on the three sources of energy that are relevant to the proposed project: electricity/ natural gas, transportation fuel for vehicle trips associated with new development, and the fuel necessary for project construction. The analysis of electricity/natural gas usage is based on California Emissions Estimator Model (CalEEMod) GHG emissions modeling, which quantifies energy use for occupancy (see Appendix C).

5.3.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.3-1: Construction activities would not result in wasteful, inefficient, or unnecessary consumption of energy or have excessive energy requirements. [Threshold E-1]

Construction of the proposed project would require the use of construction equipment for grading, hauling, and building activities. Equipment proposed for these types of activities can be found in Appendix C. Electricity use during construction would vary during different phases of construction—the majority of construction equipment during grading would be gas powered or diesel powered, and the later construction phases would require gas- and electricity-powered equipment for construction and installation of project components. Construction also includes the vehicles of construction workers traveling to and from the project site and haul

trucks for the export of materials from site clearing and demolition and the export and import of soil for grading.

The construction activities are typical for projects of this nature and would not require any construction techniques that would require substantial amounts of energy. The surrounding area is already served by electrical infrastructure provided by SCE. The proposed project would connect to these existing lines. Adequate infrastructure capacity in the vicinity of the site would be available to accommodate the electricity and natural gas demand for construction activities and would not require additional or expanded infrastructure.

The construction contractors are also expected to minimize idling of construction equipment during construction as required by state law (see Section 5.2, *Air Quality*), and reduce construction and demolition waste by recycling. These required practices would limit wasteful and unnecessary electrical energy and gas consumption. Furthermore, there are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of the state. Therefore, the proposed short-term construction activities would not result in inefficient, wasteful, or unnecessary fuel consumption.

Transportation

Short-Term Construction Impacts

Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation 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 and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. The majority of construction equipment during demolition and grading would be gas powered or diesel powered, and the later construction phases would require electricity-powered equipment. Impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure.

Level of Significance Before Mitigation: Impacts would be less than significant.

Impact 5.3-2:	Operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. [Thresholds E-1 and E-2]

Electricity

Project operation would use approximately 22,838 kWh/yr for field lighting operation. While the proposed project would increase energy demand at the site compared to existing conditions, it would be required to comply with the applicable Building Energy Efficiency Standards and CALGreen. In addition, because the proposed project would be subject to the more stringent 2019 Title 24 standards and would exceed energy efficiency code requirements through project design, the project's electricity demand could potentially be lower

than the calculations presented above. Project development would not require SCE to obtain new or expanded electricity supplies, and impacts would be less than significant.

Renewable Energy

Project development would not interfere with achievement of the 60 percent Renewable Portfolio Standard set by SB 100 for 2030 or the 100 percent zero carbon energy goal for 2045. These goals apply to SCE and other electricity retailers. As electricity retailers reach these goals, emissions from end user electricity use will decrease from current emission estimates.

Vehicle Miles Traveled and Fuel Consumption

Transportation energy use depends on the type and number of trips, vehicle miles traveled (VMT), fuel efficiency of vehicles, and travel mode. Transportation energy used during operation of the site would come from employee and visitor vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would be temporary and would fluctuate throughout the lifespan of the proposed project. According to the Traffic Impact Analysis prepared for the proposed project (see Appendix F), the proposed project would generate 644 trips on a Friday evening during special events or games. However, since varsity football games are currently held at Glendale High School, the proposed project would allow varsity games to be played on-site, providing a closer venue for use by the school and local population. As described in Section 5.10, *Transportation*, project implementation would not result in an increase in VMT. Therefore, the proposed project would result in a reduction in transportation related fuel consumption.

Level of Significance Before Mitigation: Impacts would be less than significant.

5.3.4 Cumulative Impacts

The proposed project would have a stable energy use over time and would not result in significant energy use from construction or operation. Project design and operation would comply with state Building Energy Efficiency Standards, appliance efficiency regulations, and green building standards. Project development would not cause inefficient, wasteful and unnecessary energy consumption or conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, impacts from the proposed project would be less than cumulatively considerable.

5.3.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, these impacts would be less than significant: 5.3-1, and 5.3-2.

5.3.6 Mitigation Measures

Impacts would be less than significant, and no mitigation measures are necessary.

5.3.7 Level of Significance After Mitigation

Impacts would be less than significant.

5.3.8 References

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5.4 GEOLOGY AND SOILS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Crescenta Valley High School Field Improvement Project to impact geological and soil resources, paleontological resources, or unique geologic features in the unincorporated community of La Crescenta in Los Angeles County.

5.4.1 Environmental Setting

5.4.1.1 REGULATORY BACKGROUND

State

California Alquist-Priolo Earthquake Fault Zoning Act

The California Alquist-Priolo Earthquake Fault Zoning Act was signed into state law in 1972, and amended, with its primary purpose being to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. This state law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The act requires the State Geologist of the California Geologic Survey (CGS) to delineate regulatory zones known as "earthquake fault zones" along faults that are "sufficiently active" and "well defined" and to issue and distribute appropriate maps to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Pursuant to this act and as stipulated in the California Code of Regulations (CCR), Title 14, Section 3603(a), structures for human occupancy are not permitted to be placed across the trace of an active fault. The act also prohibits structures for human occupancy within 50 feet of the trace of an active fault, unless proven by an appropriate geotechnical investigation and report that the development site is not underlain by active branches of the active fault, as stipulated in 14 CCR Section 3603(a). Furthermore, the act requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting, as stipulated in 14 CCR Section 3603(d).

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act was adopted by the state in 1990 to protect the public from the effects of earthquake hazards other than surface fault rupture, such as strong ground shaking, liquefaction, seismically induced landslides, or other ground failure. The goal of the act is to minimize loss of life and property by identifying and mitigating seismic hazards. The CGS prepares and provides local governments with seismic hazard zone maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures.

California Building Code

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The publication date

of the CBC is established by the California Building Standards Commission, and the code is under Title 24, Part 2, of the CCR. The CBC provides minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock on-site, and the strength of ground shaking with a specified probability at a site. The 2019 CBC took effect on January 1, 2020.

Regional

Los Angeles County All-Hazard Mitigation Plan

The Disaster Mitigation Act of 2000, Public Law 106-390 (Section 322(a–d)) requires that local governments, as a condition of receiving federal disaster mitigation funds, adopt a mitigation plan that describes the process for identifying hazards, vulnerabilities, and risks; identifies and prioritizes mitigation actions; encourages the development of local mitigation; and provides technical support for those efforts. In response to this and the requirements of the California Office of Emergency Services, the County prepared the Los Angeles County All-Hazard Mitigation Plan to reduce and/or eliminate the effects of hazards through well-organized public education and awareness efforts, preparedness, and mitigation.

County of Los Angeles General Plan

The following goal and policies in the safety element address seismic and geotechnical hazards and are relevant to the proposed project:

- **Policy S 1.1:** Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
- **Policy S 1.2:** Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive fault study that addresses the potential for fault rupture has been completed.

5.4.1.2 EXISTING CONDITIONS

Geologic Setting

Regional Geology

The site is north of the Verdugo Mountains, a small mountain range that is part of the Transverse Ranges system. The Transverse Ranges are divided into three segments: western, central, and eastern. The project site is in the central segment, which also includes the San Gabriel Mountains, San Rafael Hills, Puente Hills, San Jose Hills, and Chino Hills.

In the Glendale area, the CGS has mapped the Sunland, Burbank, Pasadena, Hollywood, and Los Angeles quadrangles. The project site is part of the Pasadena Quadrangle, which covers an area of about 62 squares miles in the central Los Angeles County. Regional geologic mapping has indicated that the La Crescenta and Altadena areas are built on recent alluvial fans from the San Gabriel Mountains. No known active faults or landslides underlie the project site.

Site Geology

Existing school buildings occupy the northern portion of the Crescenta Valley High School, and the existing athletic fields are in the southern portion. Topographically, the project site is relatively flat, with elevations ranging from approximately 1,460.60 feet above mean sea level at the eastern end to 1,458.20 feet above mean sea level at the western end (USGS 2019).

Soils

Soil permeability is the property of the soil to transmit water and air. The more permeable the soil, the greater the seepage, resulting in higher rates of infiltration. Pore size and number of pores closely relate to soil texture and structure and also influence permeability. Soils that transmit water faster (such as sandy soils) and have higher permeability have less shrink-swell potential because they retain less water.

Conversely, soils that transmit water at a slower rate (such as soils with high clay content) have lower permeability and therefore higher shrink-swell potential and the potential for significant expansion. Expansive clay minerals include smectite, bentonite, montmorillonite, beidellite, vermiculite, attapulgite, nontronite, illite, and chlorite. When structures are located on expansive soils, foundations have the tendency to rise during the wet season and shrink during the dry season. This movement can create new stresses on various sections of the foundation and connected utilities and can lead to structural failure and damage to infrastructure. Swelling soils can typically cause cracked foundations, floors, and basement walls. Damage to the upper floors of a building can also occur when motion in the structure is significant. The CBC considers an expansion index of 20 or less to be nonexpansive and 21 or more to be expansive.

Land subsidence is the gradual, local settling or shrinking of the earth's surface, with little or no horizontal motion. Subsidence normally results from hydrocompaction, peat oxidation, or gas, oil, or water extraction. Subsidence is not the result of landslide or ground failure.

According to the Los Angeles County Department of Public Works' Soil Type database, the project site and its surrounding areas are composed of Hanford gravelly sandy loam, which is found in alluvial fan (Los Angeles County 2018). As identified in the Seismic Hazard Zone Report, the composition of soil in the project site is mostly artificial fill (DMG 1998). Artificial fill consists of engineered fill for freeways and other developments. The soil composition for the remaining areas of the school campus, surrounding the project site, consists of young alluvial fan deposits. Young alluvial fans in the La Crescenta area are composed of sand and gravelly sand, generally described as compact to dense.

Groundwater

Groundwater-monitoring well data from the Water Resources Division of the County Department of Public Works indicate that there are no groundwater wells on the existing project site (DPW 2019). The closest well, approximately 0.4 mile from the project site, has groundwater level measurements ranging from approximately 118 to 147 feet below the ground surface.

Faults and Seismicity

Active Faults

An active fault is defined by the State Mining and Geology Board as a fault that has had surface displacement within Holocene times (approximately within the last 11,000 years) and therefore is considered more likely to generate a future earthquake. The 1994 Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones (known as earthquake fault zones) around the surface traces of active faults that pose a risk of surface ground rupture and to issue appropriate maps in order to mitigate the hazard of surface faults to structures for human occupancy and prevent the construction of buildings used for human occupancy on the surface trace of active faults.

The proposed project site is in a seismically active area, as is the majority of Southern California, and the potential for strong ground motion in the project vicinity is considered significant during the design life of the proposed improvements. The project site is not listed within an Alquist-Priolo Earthquake Fault Zone (CGS 1999). The Sierra Madre Fault Zone is approximately 2.5 miles from the site. Other fault zones in the vicinity include the Sunland fault (distance of 5.2 miles) and Raymond fault (distance of 8.3 miles). No active faults are known to cross the proposed project site, and the probability of surface fault rupture is considered low.

Ground Shaking

The strength of an earthquake is generally expressed in two ways: magnitude and intensity. The magnitude is a measure of the seismic energy radiated by the earthquake as recorded on seismographs. The intensity at a specific location is a measure that depends on the effects of the earthquake on people or buildings and is used to express the severity of ground shaking. As a rule, the greater the earthquake magnitude and the closer the fault rupture to a site, the greater the intensity of ground shaking. During an earthquake when the ground is shaking, it also experiences acceleration. Similarly, areas closer to a given fault will generally experience higher accelerations than areas farther away. A common measure of ground shaking is the peak ground acceleration (PGA). The peak acceleration is the largest increase in velocity recorded by a particular station during an earthquake. According to seismic design maps, the PGA at the project site could reach 1.008 gravities (SEAOC/OSHPD 2019).

Liquefaction

Liquefaction occurs when loose sand and silt that are saturated with water behave like a liquid when shaken by an earthquake. Earthquake waves cause water pressures to increase in the sediment and the sand grains to lose contact with each other. The soil can lose its ability to support structures, flow down even very gentle slopes, and erupt to the ground surface in sand boils. Many of these phenomena are accompanied by settlement of the ground surface, usually in uneven patterns that damage buildings, roads, and pipelines.

Three factors are required for liquefaction: (1) loose, granular sediment; (2) saturation of the sediment by shallow groundwater; and (3) strong ground shaking. Liquefaction causes three types of ground failure: lateral spreads, flow failures, and loss of bearing strength. In addition, liquefaction enhances ground settlement and may generate sand boils (fountains of water and sediment emanating from the pressurized liquefied zone).

Liquefaction is generally known to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

The project site is not in an area prone to liquefaction as indicated in the CGS's Earthquake Zones of Required Investigation: Pasadena Quadrangle. Additionally, the project site is composed of artificial fill (CSG 1999). Liquefaction susceptibility of artificial fill may be very high to low depending on (1) the nature and thickness of the fill materials, (2) whether the fill was engineered or non-engineered, (3) the susceptibility of the deposit over which the fill lies, and (4) its depth of saturation. As the project site is underlain by engineered fill, the project site is not susceptible to liquefaction. (USGS 2006).

Landslides

A landslide is the downslope movement of soil and/or rock. Landslides can range in speed from very rapid to an imperceptibly slow creep. Landslides can be caused by ground shaking from an earthquake or water from rainfall, septic systems, landscaping, or other origins that infiltrates slopes of unstable material. Boulder-strewn hillsides can also pose a boulder-rolling hazard from ground shaking, blasting, or a gradual loosening of their contact with the surface.

The likelihood of a landslide depends on an area's geologic formations, topography, ground-shaking potential, and human influences. Improper or excessive grading can increase the probability of a landslide. Land alterations such as excavation, placement of fill, removal of vegetative cover, and introduction of water from drainage, irrigation, or septic systems may further contribute to slope instability and increase the likelihood of a landslide. Undercutting support at the base of a slope or adding too much weight to the slope can also produce a landslide.

The project site is in an area of relatively flat terrain due to its current condition as supporting sporting field and associated facilities. Landslides are not common within the Pasadena Quadrangle. According to the Landslide Inventory Map, there is no landslide that underlies the project site (CGS 2007). The closest landslide is 0.6 mile from the project site and dormant, with no evidence of recent movement.

Paleontological Resources

Paleontological resources are fossils, or recognizable remains or evidence of past life on earth, including bones, shells, leaves, tracks, burrows, and impressions. As identified in the Los Angeles County General Plan EIR, the project area is not listed as a significant location for paleontological resources (Los Angeles County 2014). The project site has been previously graded, and any surficial paleontological resources that may have existed at one time have likely been previously disturbed or destroyed. Also, the ground-disturbing activities for the proposed project are limited; therefore, implementation of the proposed project is not likely to uncover any such resources.

Table 5.3-1 Significant General Fossil Localities in Los Angeles County

Location	Fossil Type	Formations
La Brea Tar Pits	N/A	N/A
Palos Verdes Peninsula	Mastodon, mammoth, horse, camel, sloth	Palos Verdes Sand
Palos Verdes Peninsula	Grey whale	San Pedro
Palos Verdes Peninsula	Fish, birds, sea lion, plants, baleen whale, horse, sloth, sea otter, mammoth, mastodon, bison, camel, tapir	Monterey Shale
Palos Verdes Peninsula	Dolphin	Monterey Shale
Santa Monica Mountains (Topanga Canyon)	Cypraeid gastropod	Topanga
Santa Monica Mountains (Old Topanga Road, Piuma Road)	Multiple	Topanga
Mint Canyon	Oldest hawk in California	Tick Canyon
Mint Canyon	Horse, elephant, camel	Mint Canyon
Puente Hills (Hacienda Heights)	Fish	Puente
Puente Hills (Diamond Bar)	Fish and leaves	Puente

Source: Los Angeles County 2014.

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:

G-1 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.)

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

G-2 Result in substantial soil erosion or the loss of topsoil.

G-3 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.

G-4 Be located on expansive soil, as defined in Table 18-1B of the Uniform building Code (1994), creating substantial direct or indirect risks to life or property.

G-5 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.

G-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold G-1.i, G-1.iii, G-1.iv, G-4, G-5, G-6

These thresholds will not be addressed in the following analysis.

5.4.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.4-1: Project occupants and visitors would be subject to potential strong seismic ground shaking. [Threshold G-1.ii])

The proposed project is in a seismically active area of Southern California, and therefore would potentially be subject to moderate to strong ground shaking from local and regional earthquakes. Strong seismic ground shaking could occur at the project site, resulting in damage to structures (e.g., bleachers, restrooms, concessions, team rooms) if they are not properly designed to withstand such conditions. Construction of the bleachers, restrooms, and team room would be subject to building design and construction standards identified in the CBC. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock on-site, and the strength of ground motion with a specified probability at the site. Additionally, during construction, on-site inspectors would ensure that the project meets and adheres to all requirements of the Division of the State Architect (DSA) for school facilities. The proposed project would be designed to meet the exacting seismic requirements of the Field Act, reviewed and approved by DSA, and construction will be monitored by a DSA-approved inspector. Adherence to such building design and construction standards would ensure that potential impacts relative to strong seismic ground shaking remain less than significant.

Level of Significance Before Mitigation: Impacts would be less than significant.

Impact 5.4-2: Unstable geologic unit or soils conditions, including soil erosion, could result from development of the project. [Thresholds G-2 and G-3]

The potential exists for soil erosion during project construction to expose the underlying ground surface. The construction contractor would be required to implement standard dust control measures and construction site stormwater runoff control measures. Conformance with such standards would reduce the potential for substantial soil erosion or the loss of topsoil from the site during the grading and construction phase. Due to the flat topography of the proposed project site, the potential for lateral spreading is considered very low. Additionally, the project site is not in an area prone to liquefaction. The project site is not at risk for on-site or

off-site landslide or rockfall events due to its relatively level surface. Project compliance with the requirements of the CBC and the DSA standards would ensure that all proposed improvements would be constructed in conformance with appropriate seismic design and construction methods to reduce potential risk to the public, thereby reducing impacts associated with unstable soils. Impacts would be less than significant.

Level of Significance Before Mitigation: Impacts would be less than significant.

5.4.4 Cumulative Impacts

Geologic Hazards

Geology and soils impacts are generally site specific and do not combine with impacts of other projects to result in cumulative impacts. Other projects proposing certain types of structures and/or tentative or final maps would be required to conduct geotechnical investigations. Other projects would also be required to comply with provisions of state law and regulations safeguarding against seismic hazards and other geologic hazards, including the CBC, the Alquist-Priolo Earthquake Fault Zoning Act, and the Seismic Hazard Mapping Act. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

Paleontological Resources

The area considered for cumulative impacts to paleontological resources is the surrounding areas of the project site: northern region of the city of Glendale and the city of La Cañada Flintridge. As identified in the Los Angeles County General Plan EIR, the project area is not listed as a significant location for paleontological resources. Other projects would involve ground disturbance, which could destroy fossils, but they would be subject to independent CEQA review, including assessment of impacts to paleontological resources, and implementation of all feasible mitigation measures for any significant impacts identified. Cumulative impacts would therefore be less than significant, and project impacts would not be cumulatively considerable.

5.4.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.3-1, 5.3-2, and 5.3-3.

5.4.6 Mitigation Measures

No mitigation measures are required.

5.4.7 Level of Significance After Mitigation

Impacts would be less than significant.

5.4.8 References

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5. Environmental Analysis
GEOLOGY AND SOILS

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5.5 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Crescenta Valley High School Field Improvement project (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 GHG, 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). GHG emissions modeling was conducted using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2.25, and model outputs are in Appendix C of this DEIR.

Terminology

The following are definitions for terms used throughout this section.

- **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 greenhouse gas absorbs relative to a molecule of carbon dioxide (CO_2) over a given period of time (20, 100, and 500 years). CO_2 has a GWP of 1.
- **Carbon dioxide-equivalent (CO_2e).** The standard unit to measure the amount of greenhouse gases in terms of the amount of CO_2 that would cause the same amount of warming. CO_2e is based on the GWP ratios between the various GHGs relative to CO_2.
- **$MTCO_2e$.** Metric ton of CO_2e.
- **$MMTCO_2e$.** Million metric tons of CO_2e.

5.5.1 Environmental Setting

5.5.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

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 fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—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 contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6),

hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[1,2] The major GHGs applicable to the proposed project are briefly described.

- **Carbon dioxide (CO_2)** 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 (CH_4)** 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 (N_2O)** 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 a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.5-1. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) 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 IPCC's Fourth Assessment Report's (AR4) GWP values for CH_4, 10 MT of CH_4 would be equivalent to 250 MT of CO_2.

Table 5.5-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	Second Assessment Report Atmospheric Lifetime (Years)	Fourth Assessment Report Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO_2[1]	Fourth Assessment Report Global Warming Potential Relative to CO_2[1]
Carbon Dioxide (CO_2)	50 to 200	50 to 200	1	1
Methane[2] (CH_4)	12 (±3)	12	21	25
Nitrous Oxide (N_2O)	120	114	310	298

Source: IPCC 1995, 2007.

Notes: The IPCC published updated GWP values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2. However, GWP values identified in AR4 are used by South Coast AQMD to maintain consistency in statewide GHG emissions modeling. In addition, the 2014 Scoping Plan Update was based on the GWP values in AR4.

1 Based on 100-year time horizon of the GWP of the air pollutant compared to CO_2.

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 CO_2 is not included.

1 Water vapor (H_2O) 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. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). 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.

California's GHG Sources and Relative Contribution

In 2019, the statewide GHG emissions inventory was updated for 2000 to 2017 emissions using the GWPs in IPCC's AR4.[3] Based on these GWPs, California produced 424.10 $MMTCO_2e$ GHG emissions in 2017. California's transportation sector was the single largest generator of GHG emissions, producing 40.1 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.7 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.6 percent), high GWP gases (4.7 percent), and recycling and waste (2.1 percent) (CARB 2019a).

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine GHG emitting activities statewide were 424 $MMTCO_2e$, 5 $MMTCO_2e$ lower than 2016 levels. This represents an overall decrease of 14 percent since peak levels in 2004 and 7 $MMTCO_2e$ below the 1990 level and the state's 2020 GHG target. During the 2000 to 2017 period, per capita GHG emissions in California dropped from a peak in 2001 of 14.0 $MTCO_2e$ per capita to 10.7 $MTCO_2e$ per capita in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 41 percent decline since the 2001 peak, although the state's GDP has grown 52 percent during this period. For the first time since California started to track GHG emissions, California uses the majority of its electricity from zero-GHG sources (hydro, solar, wind, and nuclear energy) (CARB 2019b).

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, however, 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 amount of CO_2 in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). 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. However, 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

[3] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

record that assess the human influence of the trend and projections for extreme weather events. Climate-change 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 frequency of warm spells/heat waves over most land areas.
- 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

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide, average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). The years from 2014 through 2016 showed unprecedented temperatures, with 2014 being the warmest (OEHHA 2018). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels (CCCC 2012).

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms (CAT 2006). Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, with 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 occurring from 2012 to 2015 (OEHHA 2018). According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 5.5-1), and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 5.5-2, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

Table 5.5-2 Summary of GHG Emissions Risks to California

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
Water Resources Impacts	Decreasing Sierra Nevada snow pack 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 pest 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.

5.5.1.2 REGULATORY BACKGROUND

This section describes the federal, state, and local regulations applicable to GHG emissions.

Federal

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 US Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves 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 2009).

To regulate GHGs from passenger vehicles, the EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—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, per South Coast AQMD guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Reporting 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 $MTCO_2e$ or more per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2021 to 2026)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025 that required a fleet average of 54.5 miles per gallon 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 2021-2026. However, a consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America, and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and gives industry the certainty needed to make investments and create jobs. The auto companies that are parties to the voluntary agreement will only sell cars in the United States that meet these standards (CARB 2019d).

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new, large stationary sources of emissions such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy rule, which became effective on August 19, 2019. This rule was crafted under the direction of President Trump's Energy Independence Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit CO_2 emissions from coal-fired power plants.

State

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

Executive Order S-03-05

Executive Order S-03-05, signed June 1, 2005, 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)

Current State of California guidance and targets for reductions in GHG emissions are generally embodied in AB 32. 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 goals established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The first Scoping Plan was adopted by the California Air Resources Board (CARB) on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB 2008). To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

First Update to the Scoping Plan

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher at 431 $MMTCO_2e$ (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meet the goals of AB 32. However, the update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a long-term strategy for meeting the 2050 GHG goal, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent below 1990 levels by year 2030. Executive Order B-30-15 also directs 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 Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaptation strategy, Safeguarding California, in order 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 Senate Bill 32 and Assembly Bill 197, 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 direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

2017 Climate Change Scoping Plan

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero-emission (ZE/NZE) vehicle technologies; continued investment in renewables such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and TACs emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZE buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency and utilizes near-zero emissions technology and deployment of ZE trucks.

- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.

- Post-2020 Cap-and-Trade Program that includes declining caps.

- Continued implementation of SB 375.

- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and recommended local actions to reduce GHG emissions—for example, statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally appropriate goals that align with the statewide per capita targets and sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the state's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population) consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the business-as-usual yardstick—that is, what would the GHG emissions look like if the state did nothing at all beyond the policies that are already required and in place to achieve the 2020 limit, as shown in Table 5.5-3. It includes the existing renewables requirements, advanced clean cars, the "10 percent" LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 $MMTCO_2e$ above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

Table 5.5-3 2017 Climate Change Scoping Plan Emissions Reductions Gap

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	260
Gap to 2030 Target	60

Source: CARB 2017b.

Table 5.5-4 provides estimated GHG emissions compared to 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

Table 5.5-4 2017 Climate Change Scoping Plan Emissions Change by Sector

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink[1]	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	24-79	NA
Total	431	260	-40%

Source: CARB 2017b.
Notes: TCU = Transportation, Communications, and Utilities; TBD = To Be Determined.
[1] Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions 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 (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

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. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita

reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 has been defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 $MMTCO_2e$ of reductions by 2020 and 15 $MMTCO_2e$ of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and recently released another update in February 2018. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, 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 reduction 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. As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 $MMTCO_2e$ in 2035 compared to the current targets. For the next round of SCS updates, CARB's updated targets for the SCAG region are 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). CARB adopted the updated targets and methodology on March 22, 2018. All SCSs adopted after October 1, 2018, are subject to these new targets.

SCAG's Regional Transportation Plan / Sustainable Communities Strategy

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan. For the SCAG region, the 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) was adopted on April 7, 2016, and is an update to the 2012 RTP/SCS (SCAG 2016). On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020–2045 RTP/SCS), and the addendum to the Connect SoCal Program Environmental Impact Report. In general, the SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled 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 uses strategies in development of the SCAG region through horizon year 2045 (SCAG 2020). 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. Additionally, Connect SoCal also forecasts that implementation of the plan will reduce VMT per capita in year 2045 by 4.1 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 2020).

Transportation Sector Specific Regulations

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 sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). 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 global warming gases with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO_2e gram per unit of fuel energy sold in California. The LCFS requires 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 applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the State announced 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 ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles 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 are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions 80 percent below 1990 levels.

Renewables Portfolio: Carbon Neutrality Regulations

Senate Bills 1078, 107, 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. 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). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease 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 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 set 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, which raises California's RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a 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.

Executive Order B-55-18

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

Energy Efficiency Regulations

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential 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 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 2019 Building Energy Efficiency Standards were adopted on May 9, 2018, and went into effect on January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

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.[4] The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2019. The 2019 CALGreen standards became effective January 1, 2020.

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.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 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) 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 (Public Resources Code §§ 40050 et seq.). 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.

[4] The green building standards became mandatory in the 2010 edition of the code.

AB 342

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 the 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) requires areas to be set aside for collecting and loading recyclable materials in development projects (Public Resources Code §§ 42900 et seq.). 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 that consist of 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 in 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 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita 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

Senate Bill 1383

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 incomplete combustion of fuels. SB 1383 requires the state board, no later than January 1, 2018, to approve and begin implementing that 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, as specified. The bill also establishes targets for reducing organic waste in landfill. On March 14, 2017, CARB adopted the "Final Proposed 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 2017b). In-use on-road rules are 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 char broilers by over 80 percent (CARB 2017b). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the SoCAB.

5.5.1.3 EXISTING CONDITIONS

The project site houses Crescenta Valley High School. The existing high school operations currently generate greenhouse emissions from transportation, area sources, energy use, water use/wastewater generation, and solid waste disposal.

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 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

South Coast AQMD has adopted a significance threshold of 10,000 $MTCO_2e$ 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 (Working

Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, South Coast AQMD identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010a). This 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 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 identified 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 identified a screening-level threshold of 3,000 $MTCO_2e$ annually for all land use types. The bright-line screening-level criteria are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their 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 therefore, less than cumulatively considerable impact on GHG emissions. South Coast AQMD recommends use of the 3,000 $MTCO_2e$ 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.[5]

The South Coast AQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 $MTCO_2e$ per year per service population ($MTCO_2e$/year/SP) for project-level analyses and 6.6 $MTCO_2e$/year/SP for plan level projects (e.g., program-level projects such as general plans)

[5] South Coast AQMD had identified an efficiency target for projects that exceed the bright-line threshold: a 2020 efficiency target of 4.8 $MTCO_2e$ per year per service population ($MTCO_2e$/year/SP) for project-level analyses and 6.6 $MTCO_2e$/year/SP for plan-level projects (e.g., general plans). Service population is generally defined as the sum of residential and employment population of a project. The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.[5]

for the year 2020.[6] The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.[7]

For purposes of this analysis, because the District has not developed its own numeric GHG significance threshold, the South Coast AQMD Working Group's bright-line screening-level criterion of 3,000 $MTCO_2e$ per year is used as the significance threshold for this project. If the project operation-phase emissions exceed this criterion, GHG emissions would be considered potentially significant in the absence of mitigation measures.

5.5.3 Plans, Programs, and Policies

Plans, programs, and policies (PPP) are identified below, including applicable regulatory requirements and conditions of approval for GHG emissions.

PPP GHG-1 New buildings are required to achieve the current California Building Energy and Efficiency Standards (Title 24, Part 6) and California Green Building Standards Code (CALGreen) (Title 24, Part 11). The 2019 Building and Energy Efficiency Standards were effective on January 1, 2020. The Building Energy and Efficiency Standards and CALGreen are updated tri-annually with a goal to achieve zero net energy for residential buildings by 2020 and non-residential buildings by 2030.

PPP GHG-2 New buildings are required to adhere to the California Green Building Standards Code (CALGreen) requirement to provide bicycle parking for new nonresidential buildings, or meet local bicycle parking ordinances, whichever is stricter (CALGreen Sections 5.106.4.1, 14.106.4.1, and 5.106.4.1.2). The proposed project would be required to provide anchored bicycle racks and long-term secured bicycle parking.

PPP GHG-3 California's Green Building Standards Code (CALGreen) requires the recycling and/or salvaging for reuse at minimum of 65 percent of the nonhazardous construction and demolition waste generated during most "new construction" projects (CALGreen §§ 4.408 and 5.408). Construction contractors are required to submit a construction waste management plan that identifies the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project, or salvaged for future use or sale and the amount (by weight or volume).

PPP GHG-4 Construction activities are required to adhere to California Code of Regulations, Title 13, Section 2499, which requires that nonessential idling of construction equipment is restricted to five minutes or less.

[6] It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

[7] South Coast AQMD took the 2020 statewide GHG reduction target for land use only GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

PPP GHG-5 New buildings are required to adhere to the California Green Building Standards Code and Water Efficient Landscape Ordinance requirements to increase water efficiency and reduce urban per capita water demand.

5.5.4 Environmental Impacts

5.5.4.1 METHODOLOGY

This GHG emissions evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG emissions impacts are likely in conjunction with the type and scale of development associated with the proposed project. Air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2.25 CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions) and area sources and indirect emissions from energy use, mobile sources, waste disposal (annual only), and water/wastewater (annual only).

The following provides a summary of the assumptions used for the proposed project analysis. GHG emissions modeling datasheets are in Appendix C.

Construction Phase

Construction would entail demolition and debris haul, grading and soil haul, trenching, construction of the proposed stadium and ancillary buildings, architectural coating, and finishing and landscaping on 1.01 acres of the approximately 4.37-acre project site. The proposed project is anticipated to be constructed over a period of 21 months, from June 2022 to March 2024. Construction air pollutant emissions are based on CalEEMod default construction durations normalized to fit the 21-month construction schedule. 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 project.

Operational Phase

- **Energy:** Implementation of the proposed project would also include field lighting. GHG emissions from field lighting were based on the electricity use provided by Musco and the carbon intensity of unincorporated community of La Crescenta's electric utility.

Life cycle emissions are not included in the GHG analysis, consistent with California Resources Agency directives.[8] Black carbon emissions are not included in the GHG analysis because CARB does not include this pollutant in the state's AB 32/SB 32 inventory but treats it separately.[9]

5.5.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.5-1: Implementation of the proposed project would generate a net increase in GHG emissions, either directly or indirectly, that would 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.

Implementation of the proposed project would improve the Crescenta Valley High School's existing athletic facilities, which would allow for varsity games that are currently held at Glendale High School to be played on-site. As a result, the proposed project would provide a closer option for stadium events for use by the school and local population. As described in Section 5.10, *Transportation*, project implementation would not result in an increase in VMT. Therefore, GHG emissions associated with transportation emissions are not anticipated to increase. . Operation of the ancillary structures would result in a nominal increase in energy use. GHG emissions associated with field lighting for the stadium would generate 12 $MTCO_2e$ per year. As shown in Table 5.5-5, the proposed project would not exceed South Coast AQMD's bright-line significance threshold. As a result, GHG emissions associated with the project are considered less than significant.

Table 5.5-5 Project-Related GHG Emissions

Source	GHG Emissions ($MTCO_2e$ per Year)
Construction	
2022	156
2023	281
2024	32

[8] 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 analysis was not warranted for project-specific 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 is also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

[9] Particulate matter emissions, which include black carbon, are analyzed under *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 2017a).

Table 5.5-5 Project-Related GHG Emissions

Source	GHG Emissions ($MTCO_2e$ per Year)
Total Construction	470
Operation	
Energy[1]	12
30-Year Amortized Construction[2]	16
Total All Sectors	27
Bright-Line Threshold	3,000
Exceeds Threshold?	No

Source: CalEEMod, Version 2016.3.2.25.
Notes: Manual summation of emissions may not equal the shown total due to rounding.
[1] Energy from the stadium lighting is based on the carbon intensity of unincorporated community of La Crescenta's electric utility and energy use identified in the Musco lighting study. [1]
[2] Construction emissions are amortized over a 30-year project lifetime.

Level of Significance Before Mitigation: Less Than Significant.

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

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

CARB Scoping Plan

CARB's Scoping Plan is California's GHG reduction strategy to achieve the state's GHG emissions reduction target established by AB 32, which is to return to 1990 emission levels by year 2020. The CARB 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.

Since adoption of the 2008 Scoping Plan, state agencies have adopted programs identified in the plan, and the legislature has passed additional legislation to achieve the GHG reduction targets. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, 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. Also, new buildings are required to comply with the latest applicable Building Energy Efficiency Standards and CALGreen. On December 24, 2017, CARB adopted the Final 2017 Climate Change Scoping Plan Update to address the new 2030 interim target to achieve a 40 percent reduction below 1990 levels by 2030, established by SB 32 (CARB 2017c). While measures in the Scoping Plan apply to state agencies and not the proposed project, the project's GHG emissions would be reduced by statewide compliance with measures that have been adopted since AB 32 and SB 32 were adopted. Therefore, the proposed project would not obstruct implementation of the CARB Scoping Plan, and impacts would be less than significant.

SCAG's Regional Transportation Plan / Sustainable Communities Strategy

On September 3, 2020, SCAG unanimously voted to approve and fully adopt Connect SoCal (2020–2045 RTP/SCS), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal finds that land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options would be consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in Connect SoCal is to plan for the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2020). Connect SoCal's transportation projects help more efficiently distribute population, housing, and employment growth, and forecast development is generally consistent with regional-level general plan data to promote active transportation and reduce GHG emissions. 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.

The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency to governments and developers. Because stadium operations would be moved to the project site upon completion of construction, the proposed project would provide students and the local population with a closer option for stadium events, thereby reducing VMT in the District. Therefore, the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS, and impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

5.5.5 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 project-specific impacts, but the proposed project's contribution to a cumulative impact. Implementation of the proposed project would not result in annual emissions that would exceed South Coast AQMD's bright-line threshold. 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.

5.5.6 Level of Significance Before Mitigation

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

5.5.7 References

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5.6 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential impacts of the proposed project on human health and the environment due to exposure to hazardous materials or conditions associated with the project site, project construction, and project operations. Potential project impacts and appropriate mitigation measures or standard conditions are included as necessary.

5.6.1 Environmental Setting

5.6.1.1 REGULATORY BACKGROUND

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 (42 US Code §§ 6901 et seq.) is the principal federal law that regulates the generation, management, and transportation of waste. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste. The RCRA gave the US Environmental Protection Agency (EPA) the authority to control hazardous waste from "cradle to grave"—that is, from generation through transportation, treatment, storage, and disposal—at active and future facilities. It does not address abandoned or historical sites. The RCRA also set up a framework for managing nonhazardous wastes. Later amendments required phasing out land disposal of hazardous waste and added underground tanks storing petroleum and other hazardous substances.

Emergency Planning and Community Right-to-Know Act

Title III of the Superfund Amendments and Reauthorization Act authorized the Emergency Planning and Community Right-to-Know Act (EPCRA) to inform communities and citizens of chemical hazards in their areas by requiring businesses to report to state and local agencies the locations and quantities of chemicals stored on-site; releases to the environment of more than 600 designated toxic chemicals; off-site transfers of waste; and pollution prevention measures and activities and to participate in chemical recycling (42 US Code §§ 11001 et seq.). The EPA maintains and publishes an online, publicly available, national database of toxic chemical releases and other waste management activities by certain industry groups and federal facilities—the Toxics Release Inventory.

To implement EPCRA, each state appointed a state emergency response commission to coordinate planning and implementation activities associated with hazardous materials. The commissions divided their states into emergency planning districts and named a local emergency planning committee for each district. The federal EPCRA program is implemented and administered in California by the Governor's Office of Emergency Services (Cal OES), a state commission, 6 local committees, and 81 certified unified program agencies. Cal OES coordinates and provides staff support for the commission and local committees.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 gives the EPA authority to require reporting, record-keeping, testing, and restrictions relating to chemical substances and/or mixtures. TSCA addresses the production, importation, use, and disposal of specific chemicals, including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. Title IV of the TSCA directs the EPA to regulate lead-based paint hazards.

TSCA's sections 402/404 requires that those engaged in lead abatements, risk assessments, and inspections in homes or child-occupied facilities (such as day care centers and kindergartens) built prior to 1978 be trained and certified in specific practices to ensure accuracy and safety. TSCA Section 403, Residential Hazard Standards for Lead in Paint, Dust and Soil, sets standards for dangerous levels of lead in paint, household dust, and residential soil.

Occupational Safety and Health Act

The federal Occupational Safety and Health Act (OSHA) of 1970 (29 US Code §§ 651 et seq.) authorizes each state to establish its own safety and health programs with the approval of the US Occupational Safety and Health Administration. The California Department of Industrial Relations regulates implementation of worker health and safety in California. California OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices. California standards for workers dealing with hazardous materials are in Title 8 of the California Code of Regulations (CCR) and include practices for all industries as well as specific practices for construction and other industries. Workers at hazardous waste sites (or working with hazardous wastes, e.g., during excavation of contaminated soil) must receive special training and medical supervision according to the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations.

OSHA Regulation Title 29 Code of Federal Regulations Standard 1926.62 regulates the demolition, renovation, or construction of buildings involving lead materials. Federal, State, and local requirements also govern the removal of asbestos or suspected asbestos-containing materials (ACMs), including the demolition of structures where asbestos is present. All friable (crushable by hand) ACMs and nonfriable ACMs subject to damage must be abated prior to demolition following all applicable regulations.

Title 40, Code of Federal Regulations, Part 745

Part 745 contains regulations developed under sections 402 and 406 of the Toxic Substances Control Act and applies to all renovations performed for compensation in target housing[1] and child-occupied facilities. The purpose of this subpart is to ensure that:

[1] Target Housing: Any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is under 6 years of age resides or is expected to reside in such housing for the elderly or persons with disabilities) or any 0-bedroom dwelling.

- Owners and occupants of target housing and child-occupied facilities receive information on lead-based paint hazards before these renovations begin.
- Individuals performing renovations regulated in accordance with Section 745.82 are properly trained; renovators and firms performing these renovations are certified; and the work practices in Section 745.85 are followed during these renovations.

Title 40, Code of Federal Regulations, Section 61 Subpart M

The National Emissions Standards for Asbestos sets emissions standards for asbestos from demolition and renovation activities and for waste disposal from such activities.

Title 29, Code of Federal Regulations, Section 1926.62

Section 1926.62 sets standards for occupational health and environmental controls for lead exposure in construction, regardless of the lead content of paints and other materials. The standards include requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation and monitoring. The EPA's 2008 Lead-Based Paint Renovation, Repair and Painting Rule (as amended in 2010 and 2011) aims to protect the public from lead-based paint hazards associated with renovation, repair, and painting activities. These activities can create hazardous lead dust when surfaces with lead paint, even from many decades ago, are disturbed. The rule requires workers to be certified and trained in the use of lead-safe work practices and requires renovation, repair, and painting firms to be EPA certified. These requirements became fully effective April 22, 2010.

State

California Environmental Protection Agency

The California Environmental Protection Agency (CalEPA) was created in 1991, unifying California's environmental authority in a single cabinet-level agency and bringing the California Air Resources Board, State and regional water boards, California Department of Resources Recycling and Recovery, Department of Toxic Substances Control, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed under the CalEPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of state resources. Its mission is to restore, protect, and enhance the environment and to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substance Control

The DTSC is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. The DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous

waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

The Cortese List (Government Code Section 65962.5) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by the State Water Resources Control Board as having underground storage tank leaks and a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

Regional Water Quality Control Boards

The RWQCBs are a department of CalEPA that oversee investigation and cleanup of sites, including underground storage tanks where wastes have been discharged, in order to protect the water quality of the state. The RWQCBs regulate wastewater discharges to surface waters and to groundwater. They also regulate stormwater discharges from construction, industrial, and municipal activities.

California Health and Safety Code

CalEPA has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531 et seq. incorporate the requirements of the Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section 25534 directs owners or operators storing, handling, or using regulated substances exceeding threshold planning quantities to develop and implement a risk management plan. The risk management plans are submitted for review to the administering agency and possibly the EPA, depending on the chemical and the amount.

Hazardous Materials Release Response Plans and Inventory Law

The Hazardous Materials Release Response Plans and Inventory Law (Health and Safety Code §§ 25500 et seq.) aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on-site, to prepare an emergency response plan, and to train employees to use the materials safely. Any business that handles hazardous materials in quantities equal to or greater than 55 gallons, 500 pounds, or 200 cubic feet of gas must submit a business plan.

Hazardous Materials Transportation

The US Department of Transportation and Section 31303 of the California Vehicle Code regulate hazardous materials transport. The California Highway Patrol and California Department of Transportation are the enforcement agencies. Cal OES provides emergency response services involving hazardous materials incidents.

Worker and Workplace Hazardous Materials Safety

The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle.

Hazardous Materials in Structures: Asbestos-Containing Materials and Lead-Based Paint

Several regulations and guidelines pertain to abatement of and protection from exposure to ACM and lead-based paint (LBP), including Construction Safety Orders 1529 (pertaining to ACM) and 8 CCR Section 1532.1 (pertaining to LBP), and Part 61, Subpart M, of the Code of Federal Regulations (pertaining to ACM). In California, ACM and LBP abatement must be performed and monitored by contractors with appropriate certification from the California Department of Health Services. Asbestos is also regulated as a hazardous air pollutant under the Clean Air Act and a potential worker safety hazard under the authority of Cal/OSHA.

Requirements for limiting asbestos emissions from building demolition and renovation are specified in the South Coast Air Quality Management District's Rule 1403—Asbestos Emissions from Demolition/Renovation Activities. California Government Code Sections 1529 and 1532.1 provide for exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead and ACMs.

California Airport Land Use Compatibility Planning Handbook

The California Airport Land Use Compatibility Planning Handbook provides planning guidance to airport land use commissions and counties and cities with jurisdiction over airport area land uses. The purpose of the handbook is to support the State Aeronautics Act. The handbook allows jurisdictions flexibility in determining air safety zones that represent areas of assumed accident potential.

Local

County of Los Angeles All-Hazard Mitigation Plan

Los Angeles County developed an All-Hazard Mitigation Plan to reduce the threats to life and property from future incidents. The plan was prepared in accordance with the requirements of the Disaster Mitigation Act of 2000. A risk assessment was conducted to identify and profile natural and man-made hazards that pose a risk to the county, assess the county's vulnerability to these hazards, and examine the capabilities in place to mitigate them. Based on the risk assessment, goals and objectives for reducing the county's vulnerability to hazards were identified. The five goals of the mitigation plan are:

- Protect life and property
- Enhance public awareness
- Preserve natural systems
- Encourage partnerships and implementation
- Strengthen emergency services (Los Angeles County 2014)

County of Los Angeles General Plan

The following goals and policies in the Safety Element, Fire Hazards and Emergency Response, are relevant to the proposed project:

Goal S 3: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.

- **Policy S 3.4:** Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire-resistant building materials, vegetation management, fuel modification and other fire hazard reduction programs.
- **Policy S 3.5:** Encourage the use of low-volume and well-maintained vegetation that is compatible with the area's natural vegetative habitats.
- **Policy S 3.9:** Adopt by reference the County of Los Angeles Fire Department Strategic Fire Plan, as amended.

Goal S 4: Effective County emergency response management capabilities.

- **Policy S 4.1:** Ensure that residents are protected from the public health consequences of natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.
- **Policy S 4.2:** Support County emergency providers in reaching their response time goals.
- **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.
- **Policy S 4.5:** Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.
- **Policy S 4.6:** Ensure that essential public facilities are maintained during natural disasters, such as flooding (Los Angeles County 2015).

5.6.1.2 EXISTING CONDITIONS

Historic and Current Usage of the Site

The project site is currently developed as the Crescenta Valley HS campus. Based on a review of historical aerial photographs and topographic maps, the project site has been used as a school since 1933. In the 1960s, the school was expanded with additional buildings and the track and field, similar to existing layout of the project site (NETR 2019).

Environmental Records Review

An environmental database search was conducted on selected hazardous materials sites within the project site and for a quarter-mile radius surrounding the project site from the following databases:

- GeoTracker, State Water Resources Control Board (SWRCB 2019)

- EnviroStor, Department of Toxic Substances Control (DTSC 2019)
- EnviroMapper, US Environmental Protection Agency (USEPA 2019a)
- EJScreen, US Environmental Protection Agency (USEPA 2019b)
- Solid Waste Information System (SWIS), California Department of Resource Recovery and Recycling (CalRecycle 2019)

The project site and the quarter-mile radius of surrounding area does not appear on any regulatory agency database, indicating that there are no existing recognized contaminated conditions either on or in the vicinity of the proposed project site.

Airport-Related Hazards

The proposed project site is approximately 6.7 miles east of the Bob Hope Airport in Burbank. According to the Bob Hope Airport Influence Area Map, the project site is not in an airport land use plan area (Los Angeles County 2004).

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:

H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

H-2 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.

H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.

H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

H-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area.

H-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

H-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold H-1
- Threshold H-2
- Threshold H-3
- Threshold H-4
- Threshold H-5

These impacts will not be addressed in the following analysis.

5.6.3 Environmental Impacts

5.6.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.6-1: Project development could affect the implementation of an emergency responder or evacuation plan. [Threshold H-6]

Compliance with the Standardized Emergency Management System (SEMS) is required to "be documented in the areas of planning, training, exercise, and performance" (19 CCR Division 2 § 2443). The Los Angeles Operational Area Emergency Response Plan (OAERP) was approved by county board of supervisors on June 2012. The purpose of the OAERP is to establish the coordinated emergency management system, including prevention, protection, response, recovery and mitigation before, during, and after an emergency. Under the OAERP, the Office of Emergency Management is responsible for organizing and directing the preparedness efforts of Los Angeles County. The OEM is the day-to-day operational area coordinator for the County (Los Angeles County 2012).

The proposed project would not interfere with the implementation of the OAERP or any of the daily operations of the County's Emergency Operation Center, the Los Angeles County Fire Department (LACFD), or the Los Angeles County Sherriff's Department. All construction activities would be required to be performed per the County's and LACFD's standards and regulations. For example, the proposed project's construction contractor would be required to prepare a construction traffic control plan that would ensure that construction activities would not impede with on- and off-site access and circulation for emergency vehicles and services during the construction phase. As appropriate, a traffic control plan would be prepared and implemented to ensure that the project does not interfere with the circulation of emergency service vehicles and that emergency access to and from the site and any neighboring properties is maintained at all times.

The proposed project would also be required to go through the County's development review and permitting process and would be required to incorporate all applicable design and safety standards and regulations—as set forth by LACFD and in Title 32 (Fire Code) of the County's Code of Ordinance—to ensure that they do not

interfere with the provision of local emergency services (e.g., provision of adequate access roads to accommodate emergency response vehicles, adequate numbers/locations of fire hydrants).

Therefore, the proposed project would not impair implementation of or physically interfere with the Los Angeles County's emergency response or evacuation plans. Project-related impacts would be less than significant, and no mitigation measures are necessary.

Level of Significance Before Mitigation: Impacts would be less than significant.

Impact 5.6-2: The project site is in a designated fire hazard zone and could expose structures and/or residences to fire danger. [Threshold H-7]

A wildland fire hazard area is typically characterized by areas with limited access, rugged terrain, limited water supply, and combustible vegetation. The proposed project is not in a state or local responsibility area (SRA or LRA) or land classified as a very high fire hazard severity zone (FHSZ), as identified in the Los Angeles County Fire Hazard Severity Zone Map (CAL FIRE 2007b). The nearest SRA FHSZ is approximately 1.25 miles north, and the nearest LRA FHSZ is approximately 0.43 mile south. Land between the edge of the nearest FHSZ and the project site is dense urban development and Interstate 210.

According to Cal OES, a Wildland-Urban Interface or WUI is defined as any area where structures and other human development meet or intermingle with wildland vegetation (Cal OES 2018). There are two types of classification of WUI areas: interface and intermix. Interface WUIs are areas with housing in the vicinity of contiguous wildland vegetation, and intermix WUIs are areas where housing and vegetation intermingle. As identified in the Wildland-Urban Interface Change 1990-2010 map, the proposed project is in an intermix WUI area (UWM 2010).

The proposed project would be confined to the existing high school campus. The project site is surrounded by single-family residences and I-210. There is no wildland susceptible to wildfire on or near the project site. Therefore, implementation of the proposed project would not introduce people or structures to substantial hazards from wildland fires. Impacts would be less than significant, and no mitigation measures are necessary.

Level of Significance Before Mitigation: Impact would be less than significant.

5.6.4 Cumulative Impacts

The area considered for cumulative impacts is the unincorporated community of La Crescenta-Montrose within Los Angeles County. Hazards and hazardous waste impacts are typically unique to each site and do not usually contribute to cumulative impacts. Cumulative development projects would be required to assess potential hazardous materials impacts on the development site prior to grading. The proposed project and cumulative projects would be required to comply with laws and regulations governing hazardous materials and hazardous waters used and generated, as described in Section 5.6.1.1. Therefore, cumulative impacts related to hazards and hazardous materials would be less than significant after regulatory compliance.

5.6.5 Level of Significance Before Mitigation

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

5.6.6 Mitigation Measures

No mitigation measures are required.

5.6.7 Level of Significance After Mitigation

The mitigation measures would reduce potential impacts of hazards and hazardous materials to less than significant. No significant unavoidable adverse impacts relating hazards have been identified.

5.6.8 References

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5.7 HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts to hydrology and water quality conditions in the unincorporated community of La Crescenta from implementation of the proposed project. Hydrology deals with the distribution and circulation of water, both on land and underground. Water quality deals with the quality of surface- and groundwater. Surface water includes lakes, rivers, streams, and creeks; groundwater is under the earth's surface.

5.7.1 Environmental Setting

5.7.1.1 REGULATORY BACKGROUND

Federal

Clean Water Act

The federal Water Pollution Control Act (or Clean Water Act [CWA]) is the principal statute governing water quality. It establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the US Environmental Protection Agency (EPA) authority to implement pollution control programs, such as setting wastewater standards for industry. The statute's goal is to completely end all discharges and to restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates direct and indirect discharge of pollutants; sets water quality standards for all contaminants in surface waters; and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards for navigable bodies of water; and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution. Section 402 of the CWA requires a permit for all point source (a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel) discharges of any pollutant (except dredge or fill material) into waters of the United States.

Under the CWA, an applicant for a federal license or permit to conduct any activity that may result in a discharge to Waters of the United States must provide the federal agency with a Section 401 certification. The certification, made by the state in which the discharge originates, declares that the discharge will comply with applicable provisions of the Act, including water quality standards. A state's water quality standards specify the designated use of a stream or lake (e.g., for water supply or recreation), pollutant limits necessary to protect the designated use, and policies to ensure that existing water uses will not be degraded by pollutant discharges.

Safe Drinking Water Act

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the EPA to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum

contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board (SWRCB) conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year. The project site is not located within a 100-year floodplain.

State

Porter-Cologne Water Quality Act

In the State of California, the SWRCB and Regional Water Quality Control Boards (RWQCB) have assumed the responsibility of implementing the EPA's National Pollutant Discharge Elimination System (NPDES) and other programs under the CWA, such as the Impaired Waters Program and the Antidegradation Policy. The primary quality control law in California is the Porter-Cologne Water Quality Act (Water Code §§ 13000 et seq.). Under Porter-Cologne, the SWRCB issues joint federal NPDES stormwater permits and state waste discharge requirements (WDRs) to operators of municipal separate storm sewer systems (MS4s), industrial facilities, and construction sites to obtain coverage for the stormwater discharges from these operations.

Basin Plan for the Los Angeles Region

In addition to its permitting programs, the SWRCB, through its nine RWQCBs, developed regional water quality control plans (or basin plans). These plans designate beneficial uses and water quality objectives for California's surface waters and groundwater basins, as mandated by both the CWA and the state's Porter-Cologne Water Quality Act. Water quality standards are therefore established in these basin plans and provide the foundation for the regulatory programs that are implemented by the state. The unincorporated community of La Crescenta is in Region 4 under the Los Angeles RWQCB. The Los Angeles RWQCB's Basin Plan gives direction on the beneficial uses of the state waters within the region; described the water quality that must be maintained to support such uses; and provide programs, projects, and other actions necessary to achieve the standards in the Basin Plan.

State Water Resources Control Board General Construction Permit

The SWRCB has adopted a statewide Construction General Permit (Order No. 2012-0006-DWQ) for regulation of stormwater discharges associated with construction activity. These regulations prohibit the

discharge of stormwater from construction projects that include one acre or more of soil disturbance. Construction activities subject to this permit include clearing, grading, and other disturbance to the ground, such as stockpiling or excavation, that result in soil disturbance of at least one acre of total land area. Individual developers are required to submit permit registration documents (PRDs) to the SWRCB for coverage under the NPDES permit prior to the start of construction. The PRDs include a notice of intent (NOI), risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System website.

The NPDES Construction General Permit requires all dischargers to (1) develop and implement a SWPPP, which specifies best management practices (BMPs) to be used during construction of the project; (2) eliminate or reduce non–storm water discharge to stormwater conveyance systems; and (3) develop and implement a monitoring program of all specified BMPs. The two major objectives of the SWPPP are (1) to help identify the sources of sediment and other pollutants that affect the water quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non–storm water discharges.

Local

County of Los Angeles Grading Code

Requirements for erosion control and water quality for grading operations are set forth in Title 26 of the County Code. NPDES compliance is required for all projects within the project site.

For all new, nonresidential projects with a disturbed, graded area of less than one acre, an erosion and sediment control plan (ESCP) is required prior to issuance of a grading permit by the County. The ESCP should include specific BMPs to minimize the transport of sediment and protect public and private property from the effects of erosion or flooding and from the deposition of mud, debris, or construction-related pollutants.

For construction sites with a disturbed, graded area of one acre or more, an ESCP and a State SWPPP must be prepared, and an NOI must be filed with the SWRCB. Projects of this magnitude must file an NOI and receive a waste discharge identification number from the State prior to issuance of a grading permit by the County. State SWPPPs prepared in accordance with the Construction General Permit can be accepted as ESCPs.

All active projects with grading proposed in the rainy season, October 15 to April 15, must update the ESCP on file with the County annually, and all BMPs must be installed prior to the beginning of the rainy season or as determined by the County's building official.

Los Angeles County Flood Control District Code

Chapter 21 of the County Flood Control District Code, Stormwater and Runoff Pollution Control, regulates discharges to Los Angeles County Flood Control District storm drains. The following discharges to County storm drains are prohibited:

- Discharges of stormwater containing pollutant concentrations that exceed or contribute to the exceedance of a water-quality standard.
- Non–storm water discharges unless authorized by an NPDES permit and by a permit issued by the Chief Engineer.
- Discharges of sanitary or septic waste or sewage from any property or residence; any type of recreational vehicle, camper, bus, boat, holding tank, portable toilet, vacuum truck, or other mobile source; or any waste holding tank, container, or device.
- Pollutants, leaves, dirt, or other landscape debris. (County Flood Control District Code §§ 21.07 and 21.09)

Low Impact Development Standards Manual

The County prepared the 2014 Low Impact Development Standards Manual (LID Standards Manual) to comply with the requirements of the NPDES MS4 permit for stormwater and non–storm water discharges from the MS4 within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175), henceforth referred to in this document as the 2012 MS4 Permit. The LID Standards Manual provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of the county with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non–storm water discharges.

Projects are defined as "designated" or "nondesignated." Designated projects are equal to one or more acre of disturbed area and add more than 10,000 square feet of impervious surface area. Nondesignated projects are projects that are not "designated" and are residential development and redevelopment of five units or greater or all nonresidential development or redevelopment.

The project applicant must submit a LID Plan for review and approval by the Director of Public Works that provides a comprehensive, technical discussion of how the proposed project will comply with the requirements of the LID Ordinance and LID Standards Manual. The LID Plan must include the following information:

- Identification of whether the proposed project is designated or nondesignated. If a designated project, identification of the project category.
- Feasibility of infiltration, including a percolation report as part of the geotechnical report prepared by a geotechnical engineer.
- Source control measure(s) proposed to be implemented.
- Calculation of the stormwater quality design volume.
- Discussion on whether stormwater runoff harvest and use are feasible.
- Stormwater quality control measure(s) proposed to be implemented.
- Discussion of how the applicable water quality standards and total maximum daily loads will be addressed (off-site mitigation projects only).
- Proposed hydromodification controls and calculations (if necessary).
- Proposed maintenance plan (if necessary).

The LID Plan can take one of three forms:

- A section of or appendix to the hydrology report that must be submitted to the Land Development Division.
- A section of or appendix to the grading report submitted to the Building and Safety Division.
- A separate plan.

If the proposed project intends to implement privately maintained stormwater quality control measure(s), the specific BMPs will be reviewed during the grading stage. If the proposed project intends to implement publicly maintained stormwater quality control measure(s), the specific BMPs will be shown on water quality plans that are submitted separately from but concurrently with the storm drain plans.

5.7.1.2 EXISTING CONDITIONS

Surface Waters and Drainage

The project area is in the Los Angeles River Watershed, which spans 830 square miles of western, central, and southern Los Angeles County and some small areas of eastern Ventura County. The watershed extends from the San Gabriel Mountains on the northeast; to the Santa Susana Mountains and Santa Monica Mountains on the northwest and west, respectively; and south to the mouth of the Los Angeles River in Long Beach. The watershed includes all of the San Fernando Valley, much of central Los Angeles, and parts of south Los Angeles.

The Upper Los Angeles River watershed is home to approximately 2.3 million people, mostly in higher density areas in the interior valleys and foothills. The mountain areas of the watershed generate substantial runoff, much of which can be recharged into the underlying groundwater basins via favorable soils along natural stream channels and on the valley floors. Stretches of urban and suburban development on the valley floors and significant residential development in canyons and associated hillsides have resulted in the channelization of most major river and stream channels and contributed to the degraded surface water quality in those channels (GLAC 2014).

Surface Water Quality

The Verdugo Wash, which drains the Verdugo Mountains and flows into the Los Angeles River northeast of Griffith Park, is southwest of the project site. Under section 303(d) of the CWA, states are required to develop lists of impaired water bodies that do not meet the state's water quality standards. The entirety of Verdugo Wash is lined in concrete and is identified on the 303(d) list as an impaired water body by the EPA. Impairments include coliform bacteria, copper, and trash (EPA 2020). The Los Angeles River is also classified as an impaired water body and listed on the 303(d) list. Impairments include nitrogen compounds, algae, pH, and odor.

Groundwater

The project site is located above the San Fernando Valley groundwater basin and Verdugo basin (DWR 2020). The San Fernando Valley Groundwater Basin underlies the entire 227 square miles of the San Fernando Valley. This basin is bounded on the east by the Verdugo Mountains, on the north by the Little Tujunga Syncline and

the San Gabriel and Santa Susana Mountains, on west by the Simi Hills, and on the south by the Santa Monica Mountains.

Groundwater levels in the San Fernando Valley Basin have undergone a general decline in recent years. Probable causes include increased urbanization and runoff, reduced artificial recharge, and groundwater extractions by the cities of Los Angeles, Burbank, and Glendale. The Upper Los Angeles River Area Watermaster continues to monitor the situation, and efforts to reverse this trend are underway. A long-term solution will require close cooperation between the cities of Los Angeles, Burbank, and Glendale (ULARAW 2020a).

The Verdugo Basin is bounded to the north by the San Gabriel Mountains; to the east by a groundwater divide, which separates the basin from the Monk Hill Subarea of the Raymond Basin; to the south and southwest by the Verdugo Mountains; and to the northwest by a groundwater divide, which separates the basin from the San Fernando Valley Basin. All the surface water channels feed into the Verdugo Wash, which is located along the west side of the basin.

The groundwater storage area of the Verdugo Basin is 4,400 acres, and the groundwater storage capacity of the Verdugo Basin is approximately 160,000 acre-feet. Use of groundwater from the basin has been limited due to water quality problems, declining groundwater levels, and limited extraction capacity (ULARAW 2020b).

Groundwater Quality

Half of the Los Angeles Department of Water and Power's 115 groundwater wells in the San Fernando Valley are inactive due to groundwater contamination. Major contaminants include volatile organic compounds (VOCs, especially TCE [trichloroethylene], PCE [perchloroethylene], and carbon tetrachloride), nitrates, and perchlorate.

Groundwater treatment systems in the San Fernando Valley include the Tujunga Wellfield Joint Project, which uses liquid-phase granular activated carbon; the North Hollywood Operable Unit, which uses air to remove VOCs; and the Pollock Wells Treatment Plant, with four liquid-phase granular activated carbon units.

Flood Hazards

Designated Flood Zones

The proposed project area is within FEMA Flood Zone X (FEMA 2008). Zone X is an area of minimal flood hazard, usually depicted on Flood Insurance Rate Maps as above the 500-year flood level. The proposed project site is not in a flood hazard area.

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:

HYD-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

HYD-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

HYD-3 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.

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

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

iv) Impede or redirect flood flows.

HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold HYD-3 ii)
- Threshold HYD-3 iv)
- Threshold HYD-4
- Threshold HYD-5

These impacts will not be addressed in the following analysis.

5.7.3 Environmental Impacts

5.7.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.7-1: The proposed project would violate any water quality standards or waste discharge requirements. [Threshold HYD-1]

Construction Phase

Clearing, grading, excavation, and construction activities associated with the proposed project have the potential to 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. Finally, 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, development of the project would require compliance with the Construction General Permit (CGP) Water Quality Order 2009-0009-DWQ (as amended by Order No. 2010-0014-DWQ and 2012-006-DWQ), which requires the preparation and implementation of a SWPPP. A SWPPP requires the incorporation of BMPs to control sediment, erosion, and hazardous materials contamination of runoff during construction and prevent contaminants from reaching receiving water bodies. The SWRCB mandates that projects that disturb one or more acres of land must obtain coverage under the Statewide GCP. The GCP also requires that prior to the start of construction activities, the project applicant must file PRDs with the SWRCB, which includes a NOI, risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. The construction contractor is always required to maintain a copy of the SWPPP at the site and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the start of construction, the project applicant is required to provide proof of filing of the PRDs with the SWRCB, which include preparation of SWPPP. Categories of potential BMPs that would be implemented for the proposed project are described in Table 5.9-1, *Construction BMPs*. The District would comply with all applicable water quality standards and waste discharge requirements. Construction impacts to stormwater quality would be less than significant.

Table 5.9-1 Construction BMPs

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	• Use project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season) • Prevent or reduce erosion potential by diverting or controlling drainage • Prepare and stabilize disturbed soil areas	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization
Sediment Controls	• Filter out soil particles that have been detached and transported in water	Silt fence, sediment basin, sediment trap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
Wind Erosion Controls	• Apply water or other dust palliatives to prevent or minimize dust nuisance	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
Tracking Controls	• Minimize the tracking of soil offsite by vehicles	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash.

Table 5.9-1 Construction BMPs

Category	Purpose	Examples
Non-Storm Water Management Controls	• Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. • Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges.	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants.
Waste Management and Controls (i.e., good housekeeping practices)	• Manage materials and wastes to avoid contamination of stormwater.	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use.

Source: California Stormwater Quality Association (CASQA), California Construction Best Management Practices Handbook, July 2015.

Operation Phase

The proposed project would take place within the boundaries of an already developed Crescenta Valley HS campus, which is currently connected to the County's storm drain system. Prior to the start of construction, a water quality management plan (WQMP) would be prepared to describe site conditions, pollutants of concern, LID and treatment control BMPs, calculations for the design capture volume based on final site design, source control BMPs, and an operations and maintenance plan that outlines the inspection and maintenance responsibilities for the treatment control BMPs. This would reduce peak flows and infiltrate some of the stormwater into the ground. In addition, site design BMPs would be implemented, including but not limited to:

- Preserve existing drainage patterns and time of concentration.
- Minimize impervious area.
- Disconnect impervious areas.
- Native and/or drought-tolerant landscaping.

Structural control BMPs would include:

- Provide storm drain system stenciling and signage.
- Design trash and waste storage areas to reduce the potential for pollutant introduction.
- Use efficient irrigation systems and landscape design, water conservation, smart controllers, and source control, as applicable.
- Maintain and inspect the structural BMP facilities, as specified in the WQMP.

After completion of the project, ground surfaces at the project site would be either hardscape or maintained landscaping, and no large areas of exposed soil would be left to erode off the campus. The campus would not discharge increased stormwater runoff or pollutants.

Level of Significance Before Mitigation: Operation of the project would not increase stormwater runoff or pollutant discharge, and impacts would be less than significant.

Impact 5.7-2:	The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. [Threshold HYD-2]

The project site is above the San Fernando Valley groundwater basin and Verdugo basin. The proposed project does not include new wells that would extract groundwater from the aquifer. Construction and operation of the proposed project would not lower the groundwater table or deplete groundwater supplies. Furthermore, the existing school campus does not provide intentional groundwater recharge. The proposed project would install permanent bleachers and new field lighting around the existing track and field, which would increase the amount of impervious surfaces on-site. However, compared to existing conditions, this increase is not anticipated to substantially affect groundwater recharge in the area. Additionally, no water features (e.g., streams or creeks) that serve the purpose of groundwater recharge for the area are in the project vicinity. Therefore, the proposed project would not interfere with groundwater recharge. Impacts would be less than significant.

Level of Significance Before Mitigation: The proposed project would not interfere with groundwater recharge, and impacts would be less than significant.

Impact 5.7-3:	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 result in a substantial erosion or siltation on- or off-site. [Threshold HYD-3i]

There are no streams or rivers on the project site. The school is fully developed and currently connects to the Los Angeles County storm drain system, and the proposed improvements would not significantly increase impermeable surfaces on campus. Upon project completion, drainage from the campus would continue to be captured on-site or conveyed to the existing storm drains, and ultimately to the Los Angeles River and out to the Pacific Ocean.

Construction Phase

During construction, erosion and siltation from the disturbed areas may occur. Construction-related activities that expose soils to rainfall/runoff and wind are primarily responsible for erosion. Construction activities would expose soil through excavation, grading, and trenching. Unless adequate erosion controls are installed and maintained during construction, sediment may enter storm drains. Project construction would be subject to the Statewide Construction General Permit and implementation of BMPs specified in the SWPPP. BMPs would include but are not limited to: erosion control BMPs, such as hydraulic mulch, soil binders, and geotextiles and mats; the protection of storm drain inlets with an impoundment (i.e., gravel bags) around the inlet and equipped

with a sediment filter such as a fiber roll; and stabilization of all construction entrance/exit points to reduce the tracking of sediments onto adjacent streets. These requirements include provisions for erosion and pollution control measures to ensure water quality in stormwater runoff. Adherence to the BMPs in the SWPPP would reduce, prevent, or minimize soil erosion from project-related grading and construction activities. The construction-phase BMPs would also ensure effective control of sediment discharge and associated pollutants associated (e.g., nutrients, heavy metals, and certain pesticides). Therefore, project-related construction activities would not result in substantial erosion or siltation on- or off-site.

Operation Phase

Upon project completion, drainage from the campus would continue to be captured on-site or conveyed to the Los Angeles River via the same storm drains as under existing conditions. The entire campus would discharge the same amount of stormwater. No areas of exposed soil would be left to erode following project completion. All areas would either be paved or landscaped. The proposed project also includes the implementation of post-development BMPs as a part of the WQMP, which would prevent erosion and siltation on- or off-site. Furthermore, the District would be required to submit grading plans to the County per the provisions outlined in the County's Code of Ordinance. During County review of submitted grading plans, staff would ensure that the minimum requirements to regulate grading and earthwork are incorporated into the proposed project in order to control the quality of drainage and runoff (including erosion and siltation) from the project site. Thus, project development would not cause substantial erosion.

Level of Significance Before Mitigation: Project-related construction activities would not result in substantial erosion or siltation on- or off-site, and project development would not cause substantial erosion. Impacts would be less than significant.

Impact 5.7-4:	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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. [Threshold HYD-3ii]

Refer to Impact 5.7-3. The drainage pattern and the flow and rate of stormwater runoff from the campus after project completion would be the same as existing conditions. Thus, project development would not result in flooding on- or off-campus.

Level of Significance Before Mitigation: The proposed project would not alter drainage patterns, flow, or volume, and impacts would be less than significant.

5.7.4 Cumulative Impacts

Hydrology and Drainage

Cumulative projects within the Los Angeles Watershed could increase impervious areas and increase stormwater runoff rates. However, all projects within the watershed would be required to prepare and implement WQMPs that include provisions for the capture and infiltration of runoff or the temporary

detention of stormwater runoff so that post-development runoff discharges do not exceed pre-development runoff rates, in accordance with the NPDES MS4 permit. Thus, no significant cumulative drainage impacts would occur, and project drainage impacts would not be cumulatively considerable.

Water Quality

Cumulative projects have the potential to generate pollutants during project construction and operation. All construction projects that disturb one acre or more of land would be required to prepare and implement SWPPPs in order to obtain coverage under the Statewide Construction General Permit. All projects within the watershed would also be required to prepare and implement WQMPs specifying BMPs, including LID measures, that would be applied during project design and project operation to minimize water pollution from project operation. Thus, no significant cumulative water quality impacts would occur, and project water quality impacts would not be cumulatively considerable.

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, and 5.7-4.

5.7.6 Mitigation Measures

No mitigation measures required.

5.7.7 Level of Significance After Mitigation

Impacts would be less than significant.

5.7.8 References

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5.8 NOISE

This section of the Draft Environmental Impact Report (DEIR) discusses the fundamentals of sound; examines federal, state, and local noise guidelines, policies, and standards; reviews noise levels at existing noise-sensitive receptor locations; and evaluates potential noise and vibration impacts associated with the Crescenta Valley High School Field Improvement Project (proposed project); and provides mitigation to reduce noise impacts at sensitive receptor locations. This evaluation uses procedures and methodologies as specified by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) and evaluates the potential for implementation of the proposed project to result in noise and vibration impacts at nearby sensitive receptors. Appendix D of this DEIR provides supplementary local regulatory information, construction noise calculation worksheets, project-generated traffic noise modeling results, and SoundPLAN modeling output worksheets.

5.8.1 Environmental Setting

5.8.1.1 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 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually indiscernible. A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernable to most people in an exterior environment, and a 10 dB 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 weighting 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.

Technical Terminology

Noise is most often defined as unwanted sound. 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." The following are brief definitions of terminology used in this section:

- **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 which, 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 L_{50} 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 L_{10} 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).

- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the United States, the standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ 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.

- **RCNM.** Federal Highway Administration Roadway Construction Noise Model

Sound Measurement

Sound pressure is measured through the A-weighted measure 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, 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 is generated by a source, and the decibel level decreases with more distance from the 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 applies to 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 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, or 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 "Ln" values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance. Other values typically noted during a noise survey are the L_{min} and L_{max}. These are the minimum and maximum "root-mean-square" noise levels during the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and the County require that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (Ldn). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 p.m. to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. The Ldn descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 p.m. and 10:00 p.m. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly higher (*ergo*, more restrictive,).

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, the heart, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. Noise levels that reach 120 dBA cause a tickling sensation in the human ear even with short-term exposure. This is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation becomes painful. This is called the threshold of pain. Table 5.8-1 shows typical noise levels from familiar noise sources.

Table 5.8-1 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2013a.

5.8.1.2 VIBRATION FUNDAMENTALS

Vibration is an oscillating motion in the earth. Like noise, vibration is transmitted in waves, but in this case through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard.

Vibration can be either natural as in the form of earthquakes, volcanic eruptions, landslides, or man-made as from explosions, heavy machinery or trains. Both natural and man-made vibration may be continuous such as from operating machinery, or impulsive as from an explosion.

As with noise, vibration can be described by both its amplitude and frequency. Amplitude may be characterized in three ways: displacement, velocity, and acceleration. Particle displacement is a measure of the distance that a vibrated particle travels from its original position; for the purposes of soil displacement, it is typically measured in inches or millimeters. Particle velocity is the rate of speed at which soil particles move in inches per second or millimeters per second. Particle acceleration is the rate of change in velocity with respect to time and is measured in inches per second or millimeters per second. Typically, particle velocity (measured in inches per second) and/or acceleration (measured in gravities) are used to describe vibration. Table 5.8-2 presents the human reaction to various levels of peak particle velocity (PPV).

Table 5.8-2 Human Reaction to Typical Vibration Levels

Vibration Level Peak Particle Velocity (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	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 2013b.

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. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

5.8.1.3 REGULATORY BACKGROUND

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

Federal

There are no applicable federal regulations to the proposed project.

State

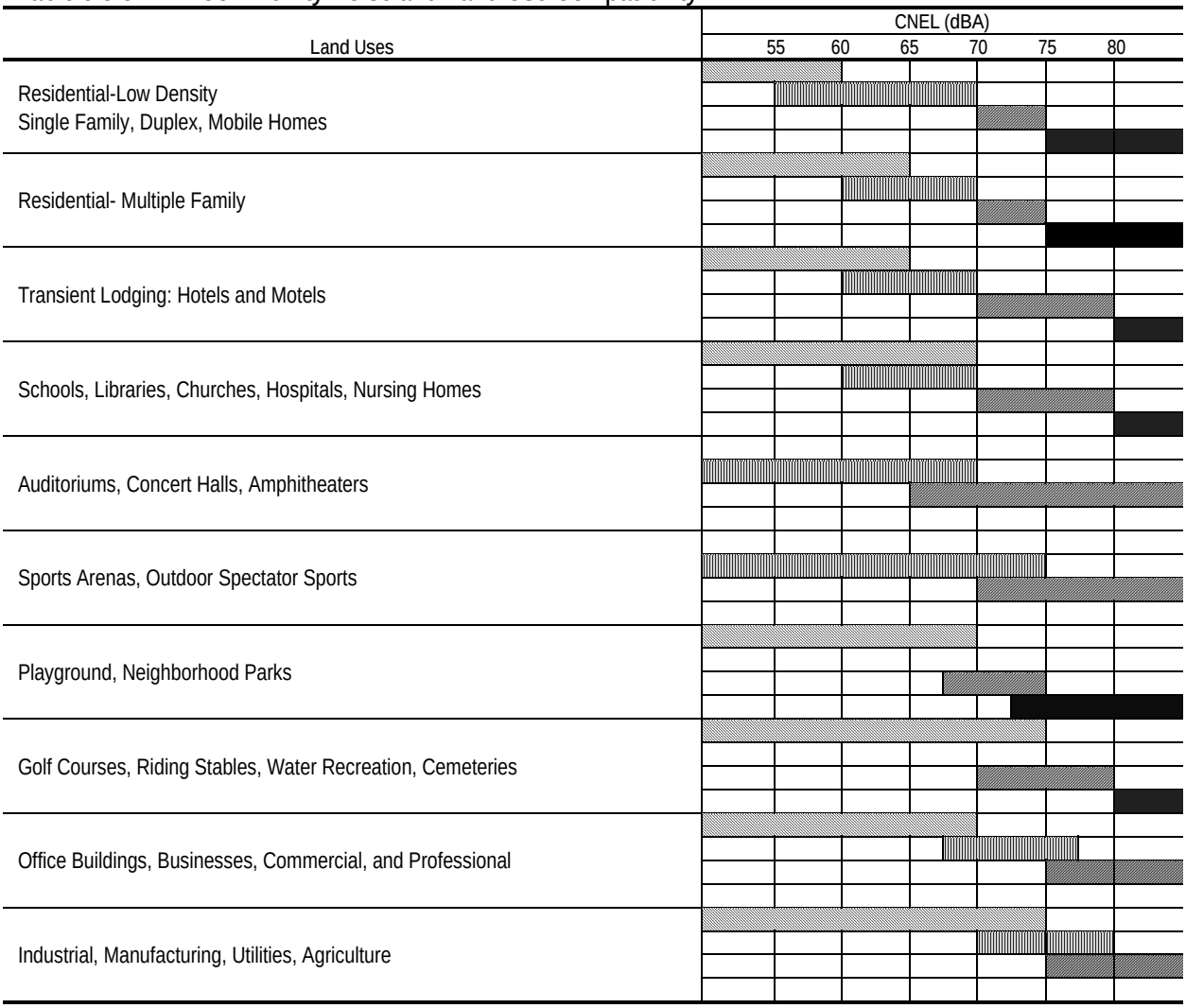
General Plan Guidelines

The State of California's General Plan Guidelines discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels expressed in CNEL. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements. Local municipalities adopt these compatibility standards as part of their general plans and modify them for the local environmental setting.

California State Land Use Compatibility Guidelines for Noise

The State Noise Compatibility Guidelines presented in Table 5.8-3, *Community Noise and Land Use Compatibility*, are derived from the State General Plan Guidelines and are designed to ensure that proposed land uses are compatible with the predicted future noise environment.

Table 5.8-3 Community Noise and Land Use Compatibility



	Normally Acceptable: With no special noise reduction requirements assuming standard construction.		Normally Unacceptable: New construction is discouraged. If new construction does not proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design.		Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: California Governor's Office of Planning and Research, State of California General Plan Guidelines Appendix D: Guidelines for the Preparation and Content of Noise Elements of the General Plan.

Local Regulations

County of Los Angeles General Plan

The County of Los Angeles encourages the reduction of noise impacts on noise-sensitive uses through goals and policies. The following goals and policies from the General Plan are applicable to the project:

Goal N1 ***The reduction of excessive noise impacts***

Policy N 1.1 Utilize land uses to buffer noise-sensitive uses from sources of adverse noise impacts.

Policy N 1.2 Reduce exposure to noise impacts by promoting land use compatibility

Policy N 1.3 Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).

Policy N 1.4: Enhance and promote noise abatement programs in an effort to maintain acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards and other applicable noise standards.

Policy N 1.6: Ensure cumulative impacts related to noise do not exceed health-based safety margins.

Policy N 1.7: Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation systems.

Policy N 1.9: Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.

Los Angeles County Code

The County's noise ordinance is designed to protect people from objectionable non-transportation noise sources. The noise standards in Table 5.8-4, *County of Los Angeles Exterior Noise Standards*, apply to all properties within a designated noise zone unless otherwise indicated.

Table 5.8-4 County of Los Angeles Exterior Noise Standards

Zone	Time Period	Exterior Noise Level, dBA[1,2]				
		L_{50}	L_{25}	L_8	L_2	L_{max}
Noise-sensitive area	Anytime	45	50	55	60	65
Residential properties	10 PM – 7 AM	45	50	55	60	65
	7 AM – 10 PM	50	55	60	65	70
Commercial properties	10 PM – 7 AM	55	60	65	70	75
	7 AM - 10 PM	60	65	70	75	80
Industrial properties	Anytime	70	75	80	85	90

Source: Los Angeles County Code, Section 12.08.390.
[1] According to Section 12.08.390, if the ambient noise levels exceed the exterior noise standards above, then the ambient noise level becomes the noise standard. Per Section 12.08.410, if the source of noise emits a pure tone or impulsive noise, the exterior noise levels limits shall be reduced by five decibels.
[2] If the measurement location is on a boundary property between two different zones, the noise limit shall be the arithmetic mean of the maximum permissible noise level

limits of the subject zones; except as provided for above, when an intruding noise source originates on an industrial property and is impacting another noise zone, the applicable exterior noise level shall be the daytime exterior noise level for the subject receptor property.

Construction Noise Standards

The County prohibits the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the hours of 7:00 pm and 7:00 am on weekdays or at any time on Sundays or holidays except for emergency work of public service utilities or by variance.

Construction noise limits for short-term operations (no more than 10 days) from "mobile equipment" and long-term operations (10 days or more) from "stationary" construction equipment are summarized in Table 5.8-5, *County of Los Angeles Construction Equipment Noise Limits*.

Table 5.8-5 County of Los Angeles Construction Equipment Noise Limits

	Time Period	Single-Family Residential	Multifamily Residential	Semi-Residential/ Commercial
Short-term mobile construction noise limits	Daily, except Sundays and legal holidays, 7 AM to 8 PM	75 dBA	80 dBA	85 dBA
	Daily, 8 PM to 7 AM and all-day Sunday and legal holidays	60 dBA	64 dBA	70 dBA
Long-term stationary noise construction limits	Daily, except Sundays and legal holidays, 7 AM to 8 PM	60 dBA	65 dBA	70 dBA
	Daily, 8 PM to 7 AM and all-day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

Source: Los Angeles County Code, Section 12.08.440. For repetitively scheduled and relatively long-term operations of 10 days or more.

Note: All mobile and stationary internal-combustion-powered equipment or machinery shall be equipped with suitable exhaust and air intake silences in proper working order.

County Vibration Standards

The County of Los Angeles Code, Section 12.08.560, prohibits the operation of any device that creates motion velocity of 0.01 inches/second (in/sec) or greater at or beyond the property boundary of the source if on private property, or at 150 feet from the source if on a public space or public right-of-way. This criterion is equivalent to 80 VdB (root-mean-square vibration decibel level).

Exempt Activities

Section 12.08.570 of the County Code exempts noise from activities conducted on public and private playgrounds or school grounds.

5.8.1.4 EXISTING CONDITIONS

Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, hospital facilities, houses of worship, and open space/recreation areas where quiet environments are necessary for the enjoyment, public health, and safety of the community. The nearest sensitive receptors to

the project site are single-family homes to the east and west. Additional residences are located further to the north and across I-210 to the south.

Ambient Noise Measurements

As of March 2020, due to COVID-19 Stay at Home orders, there has been no regular school activity or associated noise generated at Crescenta Valley HS. However, to identify baseline noise levels within the project vicinity for purposes of this DEIR, ambient noise monitoring was conducted by PlaceWorks in October 2018. Two short-term (15 minute) measurements were conducted on a weekday and two long-term (24 hours or longer) measurements were conducted between Friday, October 19, through Tuesday, October 23, 2018.

The primary noise sources during measurements were roadway traffic, aircraft overflights, and student activities from the Crescenta High School track and field. Meteorological conditions during the measurement period were favorable for outdoor sound measurements and were noted to be typical for the season. Generally, conditions included mostly clear skies with evening temperatures of 76 degrees Fahrenheit (°F) and average wind speeds between 1 to 3 miles per hour (mph). All sound level meters were equipped with a windscreen during measurements.

All sound level meters used for noise monitoring satisfy the American National Standards Institute (ANSI) standard for Type 1 instrumentation.[1] The sound level meters were set to "slow" response and "A" weighting (dBA). The meters were calibrated prior to and after the monitoring period. All measurements were at least five feet above the ground and away from reflective surfaces. Noise measurement locations are described below and shown in Figure 5.8-1, *Approximate Noise Monitoring Locations*. The long-term and short-term noise measurement results are summarized in Tables 5.8-6 and 5.8-7, respectively.

- **Long-Term Location 1 (LT-1)** was at the end of Altura Avenue, east of the Crescenta Valley High School track and field. A 3-day noise measurement was conducted, beginning at 8:00 pm on Friday, October 19, 2018. The noise environment of this site is characterized primarily by traffic on I-210 and high school track and field activities.

- **Long-Term Location 2 (LT-2)** was at the end of Altura Avenue near Ramsdell Avenue, west of the Crescenta Valley High School. A 2-day noise measurement was conducted, beginning at 9:00 pm on Friday, October 19, 2018. Noise monitoring was shorter at this location due to apparent equipment vandalism upon returning to the field. It is determined that the noise data prior to the attempted vandalism is valid and is, therefore, presented below. The noise environment of this site is characterized primarily by traffic on Ramsdell Avenue, Altura Avenue, and I-210 and by high school activities.

- **Short-Term Location 1 (ST-1)** was at the end of Altura Avenue, east of the Crescenta Valley High School track and field. A 15-minute noise measurement was conducted, beginning at 9:08 pm on Friday, October 19, 2018. The noise environment of this site is characterized primarily by high school track and field activities. At the time of noise measurement, band practice was underway.

[1] Monitoring of ambient noise was performed using Larson-Davis model LxT and 820 sound level meters.

- **Short-Term Location 2 (ST-2)** was on Ramsdell Avenue, south of Altura Avenue approximately 15 feet west of the nearest southbound travel lane. A 15-minute noise measurement was conducted, beginning at 8:45 pm on Friday, October 19, 2018. The noise environment of this site is characterized primarily by traffic on Ramsdell Avenue and activity at the Crescenta High School track and field. At the time of measurement, noise from band practice was in session. Band-related noise sound levels generally ranged from 56 dBA to 62 dBA. Traffic on Ramsdell Avenue generally ranged from 64 to 74 dBA.

Table 5.8-6 Long-Term Noise Measurements Summary in A-Weighted Sound Levels

Monitoring Location	Description	CNEL Saturday/Sunday/Monday	Lowest L_{eq}, 1-hr	Highest L_{eq}, 1-hr
LT-1	Altura Avenue – End of street, east of Crescenta High School track and field.	64/61/61	49.7	64.7
LT-2	Altura Avenue – Near Ramsdell Avenue, west of Crescenta High School	66/64/NA	53.6	63.9

Table 5.8-7 Short-Term Noise Measurements Summary in A-Weighted Sound Levels

Monitoring Location	Description	15-minute Noise Level, dBA						
		L_{eq}	L_{max}	L_{min}	L_2	L_8	L_{25}	L_{50}
ST-1	Altura Avenue - End of street, east of Crescenta High School track and field., 9:08 PM: PM, 10/19/2018	55.7	69.0	49.1	60.1	57.8	55.9	54.9
ST-2	Ramsdell Avenue – south of Altura Avenue, west of Crescenta High School, 8:45 PM: PM, 10/19/2018	61.5	76.5	52.7	70.0	65.9	60.3	56.9

5. Environmental Analysis
NOISE

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Figure 5.8-1 - Approximate Noise Monitoring Locations

5. Environmental Analysis

School Boundary
Project Boundary
ST-X Short-Term Noise Measurement Locations (2)
LT-X Long-Term Noise Measurement Locations (2)

0 400
Scale (Feet)

Source: Nearmap, 2020

5. Environmental Analysis
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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 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.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would have no impact:

- Threshold N-3

This impact will not be addressed further in the following analysis.

5.8.2.1 CONSTRUCTION NOISE THRESHOLDS

The County of Los Angeles has construction noise limits based on land use type, as discussed in Section 5.8.1.3, *Regulatory Background* (Table 5.8-5). For the purposes of this analysis, the threshold of 60 dBA daytime and 50 dBA nighttime at single-family residences is used for long-term stationary construction activity, and 75 dBA daytime and 60 dBA nighttime at single-family residences for short-term mobile construction activity.

5.8.2.2 TRANSPORTATION NOISE THRESHOLDS

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are perceptible under quiet, controlled conditions. Changes of less than 1 dBA are usually inaudible. A change of 5 dBA is readily audible to most people in an exterior environment. Based on this, traffic noise impacts are considered significant if sensitive receptor locations experience a 3 dBA or more traffic-related noise increase with implementation of the project.

5.8.2.3 STATIONARY NOISE THRESHOLDS

As discussed above in Section 5.8.1.3, *Regulatory Background*, the County's noise ordinance establishes noise level standards at receiving sensitive receptors (see Table 5.8-4). However, Section 12.08.570 of the County Code exempts noise from activities conducted on public and private playgrounds or school grounds. As discussed above under Section 5.8.1.1, a 10 dBA increase is perceived as a doubling of the sound. For the

purposes of this assessment, periodic increases in ambient noise, such as due to proposed track and field events, a threshold of 10 dBA is used.

5.8.2.4 VIBRATION THRESHOLDS

Vibration Annoyance

The Los Angeles County Code, Section 12.08.560, prohibits the operation of any device that creates motion velocity of 0.01 in/sec or greater at or beyond the property boundary of the source if on private property, or at 150 feet from the source if on a public space or public right-of-way. This criterion is equivalent to 80 VdB (root-mean-square vibration decibel level).

Architectural Damage

The County of Los Angeles does not have specific limits or thresholds for vibration-induced architectural damage related to construction activities. The FTA provides criteria for acceptable levels of groundborne vibration for various types of buildings. Therefore, the FTA criteria shown in Table 5.8-8 are used for this analysis.

Table 5.8-8 Groundborne Vibration Criteria: Architectural Damage

Building Category		PPV (in/sec)
I.	Reinforced concrete, steel, or timber (no plaster)	0.5
II.	Engineered concrete and masonry (no plaster)	0.3
III.	Non-engineered timber and masonry buildings	0.2
IV.	Buildings extremely susceptible to vibration damage	0.12

Source: FTA 2018.
PPV = peak particle velocity

5.8.3 Plans, Programs, and Policies

PPP NOI-1 Project-related construction activity will be limited to the hours of 7:00 am to 7:00 pm weekdays. Construction is prohibited on Sundays and holidays.

PPP NOI-2 The project will comply with the County of Los Angeles stationary construction equipment noise limits, as summarized above in Table 5.8-5.

PPP NOI-3 The project will comply with the County of Los Angeles vibration standards and not exceed 80 VdB at the property boundary of a sensitive receptor or beyond.

5.8.4 Environmental Impacts

5.8.4.1 METHODOLOGY

Construction noise modeling was conducted using the FHWA Roadway Construction Noise Model (RCNM). The FTA's general assessment procedure identifies areas of potential impacts with exposure to groundborne

vibration resulting in potential architectural damage during construction activities. Vibration annoyance was assessed using the County of Los Angeles vibration annoyance threshold of 0.01 in/sec root mean square, equivalent to 80 VdB. Traffic noise increases were calculated using the PM peak hour trips provided by KOA and comparing existing volumes to future no project and future plus project volumes logarithmically.[2] Periodic increases in ambient noise from use of the track and field was modeled using the SoundPLAN noise propagation model.

5.8.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.8-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project. [Threshold N-1]

Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment. Existing uses surrounding the project site would be exposed to construction noise.

Construction Vehicles

The transport of workers and materials to and from the construction site could potentially increase noise levels along local access roadways, including but not limited to I-210, La Crescenta Avenue, Pennsylvania Avenue, and Ramsdell Avenue. Individual construction vehicle pass-bys and haul trucks may create momentary noise levels of up to 85 dBA (L_{max}) at 50 feet from the vehicle, but these occurrences would generally be temporary and short lived.

The building construction phase is anticipated to generate 26 daily trips (workers and vendors combined) based on information provided by the District and the air quality modeling for the project. The addition of 26 worker and vendor trips and 26 daily haul trips would result in a negligible noise increase when compared to the thousands of existing daily trips on these roadways. Therefore, noise impacts from construction-related truck traffic would be less than significant.

Construction Equipment

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

[2] Project noise increase = 10*Log(existing plus project volumes/existing volumes); Cumulative increase = 10*Log(future plus project volumes/existing volumes).

The noise produced at each activity phase is determined by combining the L_{eq} contributions from the three loudest pieces of equipment. Construction activities associated with the proposed project would not require blasting or pile driving. Grading typically generates the highest noise levels because it requires the largest equipment. Construction noise quite often exhibits a high degree of variability because factors such as noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks in each phase result in different noise levels at a given sensitive receptor. Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of 85 dBA at 50 feet. Since noise from construction equipment is intermittent and diminishes at a rate of 6 dB per doubling distance,[3] the average noise levels at noise-sensitive receptors would be lower, because mobile construction equipment would move around the site with different loads and power requirements. Noise levels from project-related construction activities were calculated from the simultaneous use of the three loudest pieces of applicable construction equipment.

Construction building activities would be located in various areas spread throughout the high school track and field. This would include installation of proposed light poles around the track and field, bleachers, restrooms north of the track and field, a concession structure near the southwest corner of the track and field, and a home team room near the southeast corner of the track and field. The proposed team room and concession stand would be prefabricated structures, resulting in less construction activity at those locations. Overall, construction is anticipated to last approximately 1 year and 3 months.

The FHWA RCNM noise model was used to calculate construction noise as it affects nearby sensitive receptors. The RCNM includes reference noise levels for numerous equipment pieces. Since the RCNM calculations do not account for shielding due to intervening buildings and structures, ground effects, or air absorption, the results of these calculations are conservative (that is, they represent a "worst case" scenario). Table 5.8-9 summarizes construction noise levels at the closest sensitive receptors.

Table 5.8-9 Project-Related Construction Noise Levels

Construction Activity Phase	Noise Level from Construction Activities, dBA L_{eq}[1]					
	RCNM Reference Level	Nearest On-Campus Receptors	Off-Campus Receptors to the North	Off-Campus Receptors to the East of Bleachers	Off-Campus Receptors to the East of Team Room	Off-Campus Receptors to the South
	50 feet	380	500 feet	200 feet	150 feet	350 feet
Grading	85	67	65	73	75	65
Utility Trenching	77	59	57	65	67	57
Building Construction	83	65	63	71	73	63
Architectural Coating	74	56	54	62	64	54
Finish/Landscaping	77	59	57	65	67	57

Notes:
Calculations based on the 3 loudest equipment per activity phase and performed with the FHWA's RCNM software are included in Appendix D. Distance measurements were taken from the acoustical center of the construction specified area of construction.
[1] RCNM output noise L_{eq} levels rounded to the nearest whole number.

[3] The sound attenuation rate of 6 dB is generally conservative. Attenuation provided by existing buildings and structures around the project site are not taken into account.

Off-Campus Receptors to the North and East

As shown in Table 5.8-9, *Project-Related Construction Noise Levels*, each activity phase would exceed the County's stationary construction equipment noise limit of 60 dBA at the nearby sensitive receptors to the north and east. This would result in a potentially significant impact.

Off-Campus Receptors to the South

Residences to the south would be across I-210. The City of Glendale General Plan Noise Element provides existing noise contours along I-210 that extend to the unincorporated area of La Crescenta and the project area. The residences to the south are within the 70 dBA CNEL noise contour. Project construction noise levels are therefore anticipated to be overshadowed by traffic noise, and construction noise impacts to the sensitive receptors to the south would be less than significant.

Off-Campus Receptors to the West

A 540-square-foot concession stand is proposed on the southwest corner of the track and field. The concession stand would be prefabricated, and minor grading would take place before installation. It is anticipated it would take less than 10 days to complete and therefore the threshold of 75 dBA would apply (LA County Code § 12.08.440 (B)). The nearest sensitive receptors to the prefabricated structure are approximately 150 feet to the west; at these receptors, construction noise levels would be 75 dBA or less. Because of the anticipated short-term duration for this activity and because construction noise levels at these receptors would be 75 dBA or less, construction noise impacts at sensitive receptors to the west would be less than significant.

On-Campus Receptors

The nearest on-site building is approximately 250 feet from the nearest proposed construction area (bleachers). At that distance, exterior noise levels could reach up to 67 dBA L_{eq}. Typical exterior-to-interior noise attenuation is 25 dBA with windows closed, resulting in interior noise levels of approximately 42 dBA L_{eq}. The CALGreen requirements for nonresidential interior spaces is 50 dBA L_{eq}. Therefore, because average construction noise levels are not expected to exceed 50 dBA L_{eq}, this would result in a less-than-significant impact to students on campus.

Level of Significance Before Mitigation: Construction noise could at times exceed the Los Angeles County Code construction noise thresholds and would therefore be potentially significant.

Impact 5.8-2 **Project implementation would result in periodic operation-related noise that would substantially increase ambient noise levels. [Threshold N-1]**

Stationary Noise

Operational stationary noise sources from the proposed PA system and crowd noise were modeled using the SoundPLAN computer program. SoundPLAN uses industry-accepted propagation algorithms based on the International Organization for Standardization (ISO) and ÖAL-28 standards for outdoor sound propagation.

The modeling calculations account for classical sound wave divergence (spherical spreading loss with adjustments for source directivity from point sources) plus attenuation due to air absorption, ground effects, and shielding. Additionally, SoundPLAN provides for other correction factors, including level increases due to reflections, source directivity, and source tonality.

Noise modeling was conducted for residential locations closest to the project site, as shown on Figure 5.8-2, *Future Track and Field Noise Contours*. The sports field is in an area that is mostly flat. The 3,442-seat bleachers would be on the northern end of the field. Development and operation of the track and field would generate noise associated with crowds and amplified music and speech from the proposed public address (PA) system. In addition to daytime use, the future bleacher and PA noise was modeled assuming project operational noise could occur in the evening hours between 7:00 pm and 10:00 pm. The operational noise analysis assumed full capacity of the bleachers.

The proposed project would have speakers mounted on two poles east and west of the bleachers and field. On each pole, one speaker would be pointed toward the bleachers and one toward the field. Speakers would be mounted at a height of approximately 35 feet. Each speaker set was modeled as an individual point source, and the bleachers were modeled as an area source. The SoundPLAN modeling outputs are in Appendix D.

As shown in Table 5.8-7, during short-term noise monitoring in the project vicinity, noise levels ranged from approximately 56 to 62 dBA Leq. Results of SoundPLAN modeling indicate that future operational noise levels from a full-capacity event are predicted to range as high as 92 dBA Leq at the first row of residential property lines to the east of the project and up to 82 dBA Leq at the first row of residential property lines to the west. This would result in periodic ambient noise increases of approximately 36 dBA to the east and 20 dBA to the west, though multiple factors may affect overall noise levels from event to event at each residential receptor—crowd size, type of game, type of amplified or live marching band, shielding such as intervening buildings, etc. Special events with less than full capacity would increase ambient noise levels to a lesser degree. A 10 dBA increase is perceived as a doubling of the sound (see Section 5.8.1.1). Though Section 12.08.570 of the County Code exempts noise from activities conducted on public and private playgrounds or school grounds, operational noise from special events and games could at times exceed the existing ambient noise levels by more than 10 dBA and would therefore be potentially significant.

Figure 5.8-2 - Future Track and Field Noise Contours

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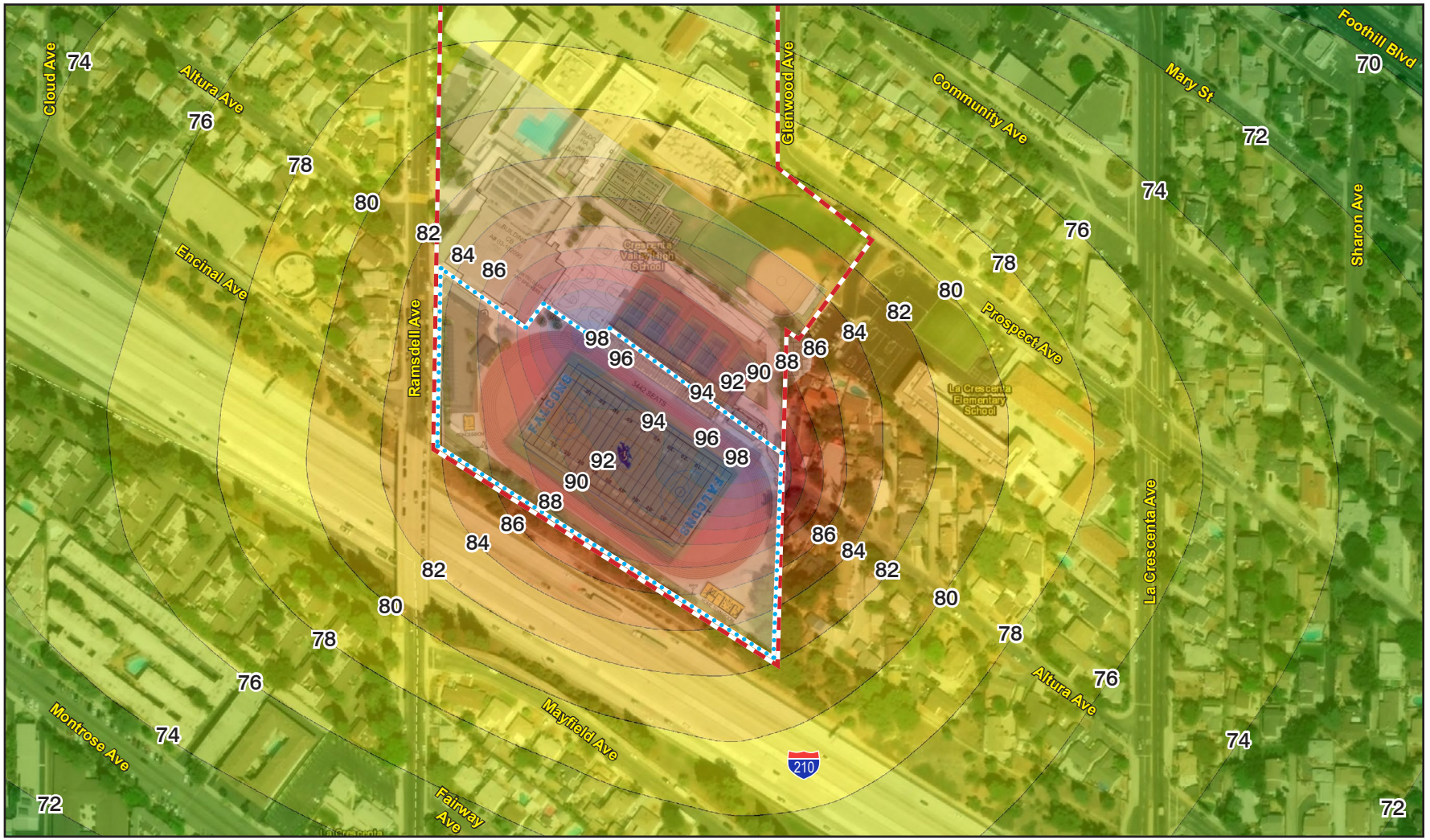

School Boundary

Project Boundary

Noise Level Leq in dB(A)

98 96 94 92 90 88 86 84 82 80 78 76 74 72 70

0 300

Scale (Feet)

Source: PlaceWorks, 2020

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Traffic Noise

Audible increases in noise generally refer to a change of 3 dBA, which is the threshold of perceptibility in exterior environments. Changes of between 1 and 3 dBA are considered potentially audible, and changes of less than 1 dBA are typically inaudible. Only audible changes (i.e., 3 dBA or more) at sensitive receptor locations are considered potentially significant, and an increase of 3 dBA CNEL is used as a threshold for a substantial traffic noise increase. A doubling of traffic flows (e.g., 10,000 vehicles per day to 20,000 per day) would be needed to create a 3 dBA CNEL increase in traffic-generated noise levels.

No new daytime student or staff trips would occur. The PM peak hour volumes were used to determine noise increases during proposed evening games and practices (Appendix D). Table 5.8-10 shows that projected traffic-related noise along study roadway segments would increase up to 2.9 dBA. Traffic noise increases would not exceed 3 dBA along study roadway segments.

Level of Significance Before Mitigation: Traffic noise increases would not exceed 3 dBA along study roadway segments, and traffic noise impacts would be less than significant. However, special event noise could at times exceed the existing ambient noise levels by more than 10 dBA and would therefore be potentially significant.

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Table 5.8-10 Project-Related Increases in Traffic Noise

Roadway Segment	PM Peak Hour Traffic Volumes				Traffic Noise Increase, dBA	
	Existing	Existing With Project	Future No Project	Future With Project	Project Noise Increase	Cumulative Noise Increase
Ramsdell Avenue - north of Foothill Boulevard	486	566	497	576	0.7	0.7
Ramsdell Avenue - south of Foothill Boulevard	407	606	419	617	1.7	1.8
Foothill Boulevard - Ramsdell Avenue to Glenwood Avenue	2,285	2,317	2,347	2,379	0.1	0.2
Foothill Boulevard - west of Ramsdell Avenue	2,286	2,427	2,351	2,492	0.3	0.4
Glenwood Avenue - north of Foothill Boulevard	80	145	85	150	2.6	2.7
Glenwood Avenue - south of Foothill Boulevard	63	122	63	122	2.9	2.9
Foothill Boulevard - Glenwood Avenue to La Crescenta Avenue	2,346	2,426	2,406	2,485	0.1	0.2
Foothill Boulevard - Glenwood Avenue to Ramsdell Avenue	2,327	2,359	2,388	2,419	0.1	0.2
La Crescenta Avenue - north of Foothill Boulevard	536	598	558	619	0.5	0.6
La Crescenta Avenue - south of Foothill Boulevard	1,175	1,321	1,212	1,358	0.5	0.6
Foothill Boulevard - east of La Crescenta Boulevard	2,092	2,147	2,144	2,199	0.1	0.2
Foothill Boulevard - La Crescenta Avenue to Glenwood Avenue	2,333	2,412	2,392	2,472	0.1	0.3
Ramsdell Avenue - north of Community Avenue	368	566	379	576	1.9	1.9
Ramsdell Avenue - south of Community Avenue	448	674	462	687	1.8	1.9
Community Avenue - east of Ramsdell Avenue	189	271	192	274	1.6	1.6
Community Avenue - west of Ramsdell Avenue	75	75	75	75	0.0	0.0
La Crescenta Avenue - north of Prospect Avenue	1,326	1,368	1,367	1,408	0.1	0.3
La Crescenta Avenue - Prospect Avenue to Altura Avenue	1,445	1,501	1,489	1,544	0.2	0.3
Prospect Avenue - east of La Crescenta Avenue	70	70	78	78	0.0	0.5
Prospect Avenue - west of La Crescenta Avenue	117	191	118	192	2.1	2.2
La Crescenta Avenue - north of Altura Avenue	1,428	1,485	1,471	1,528	0.2	0.3
La Crescenta Avenue - south of Altura Avenue	1,439	1,530	1,482	1,573	0.3	0.4
Altura Avenue - east of La Crescenta Avenue	41	41	41	41	0.0	0.0

Source: Appendix D.

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Impact 5.8-3: The project would not create short-term or long-term groundborne vibration and groundborne noise. [Threshold N-2]

Potential vibration impacts associated with development projects are usually related to the use of heavy construction equipment during the demolition and grading phases of construction. Construction can generate varying degrees of ground vibration depending on the construction procedures and equipment. 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.

Operational Vibration

The operation of the proposed project would not include any substantial long-term vibration sources. Thus, no significant vibration effects from operations sources would occur.

Vibration Annoyance

The County of Los Angeles has an established vibration threshold equivalent to 80 VdB. Table 5.8-11, *Vibration Annoyance Levels from Project Construction Equipment*, shows VdB levels for typical construction equipment and the estimated vibration levels at nearby sensitive receptors. The nearest sensitive receptors vary based on the proposed construction area, as discussed above for construction noise. The nearest off-campus receptors are approximately 150 and 200 feet from construction activity.

Table 5.8-11 Vibration Annoyance Levels from Project Construction Equipment

Equipment	VdB Levels		
	Reference Levels at 25 Feet	Residences 150 Feet East of Team Room	Residences 200 Feet East of Bleachers
Caisson Drilling	87	64	60
Loaded Trucks	86	63	59
Jackhammer	79	56	52
Small Bulldozer	58	35	31

Source: FTA 2018.

As shown in Table 5.8-11, vibration levels would not exceed 80 VdB at the nearest sensitive receptors. Therefore, this impact would be less than significant.

Architectural Damage

For reference, a peak particle velocity of 0.20 in/sec PPV is used as the limit for nonengineered timber and masonry buildings (which would apply to the off-site surrounding structures) (FTA 2018). At distances greater than 25 feet, construction-generated vibration levels would be less than 0.2 in/sec PPV. Table 5.8-12 shows typical construction equipment vibration levels and estimated vibration levels at the nearest residential structures. The nearest sensitive receptor is 35 feet east of the edge of the proposed construction site. At this distance, vibration levels would be up to 0.127 in/sec PPV, which would not exceed 0.2 in/sec PPV.

Table 5.8-12 Vibration Impact Levels for Typical Construction Equipment

	in/sec PPV	
Equipment	Reference Levels at 25 Feet	Residences 35 Feet East[1]
Vibratory Roller	0.21	0.127
Large Bulldozer	0.089	0.054
Caisson Drilling	0.089	0.054
Loaded Trucks	0.076	0.076
Jackhammer	0.035	0.021
Small Bulldozer	0.003	0.002

Source: FTA 2018.
[1] As measured from the edge of construction site using Google Earth Pro.

Level of Significance Before Mitigation: Operation of the proposed project would not include any substantial long-term vibration sources. Construction vibration would not exceed annoyance or architectural damage thresholds and would therefore be less than significant.

5.8.5 Cumulative Impacts

Cumulative Operational Impact

A cumulative traffic noise increase would be considered significant if it is greater than 3 dBA and project traffic is calculated to contribute 1 dBA or more to the overall increase. As shown in Table 5.8-10, *Project-Related Increases in Traffic Noise*, the cumulative traffic noise increase would be 2.9 dBA or less, which does not exceed the 3 dBA significance threshold. Therefore, cumulative traffic noise impacts would be less than significant.

Construction Noise and Vibration

Cumulative impacts would occur if other projects are being constructed in the vicinity of the proposed project at the same time. There are four planned and approved development projects within a quarter-mile radius of the project site—two accessory dwelling units and two single-family home developments. Considering that these projects are small residential and would be relatively short term, project construction

noise would not create cumulatively considerable impacts when combined with other planned and approved construction projects.

5.8.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.8-3.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.8-1 Project construction activities would result in temporary noise increases in the vicinity of the proposed project.
- Impact 5.8-2 Project operation including special events and games would result in substantial periodic increase in ambient noise levels.

5.8.7 Mitigation Measures

Impact 5.8-1

N-1 As required by the Los Angeles County Code, construction activities shall take place only between the hours of 7:00 am and 7:00 pm on weekdays and Saturdays, and not on Sundays or a national holiday. In addition, the following practices shall be observed and implemented:

- Erect a temporary noise barrier/curtain along the eastern and northern construction site boundaries (see Figure 5.8-3, *Proposed Temporary Noise Barrier)*. The temporary sound barrier shall have a minimum height of 12 feet and be free of gaps and holes. The barrier can be (1) a ¾-inch-thick plywood wall OR (2) a hanging blanket/curtain with a surface density or at least 2 pounds per square foot.
- Limit noise-producing signals, including horns, whistles, alarms, and bells, to safety warning purposes only.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as feasible from sensitive receptors. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
- Use "quiet" air compressors and other stationary noise sources where technology exists.

- Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- Designate a "disturbance coordinator" who will be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

Impact 5.8-2

N-2 Prior to holding the first spectator event, the District shall develop a Noise Control Plan. Signs shall be erected at entry points to show 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 District staff. In addition, the following measures shall be implemented:

- The District shall retain a qualified acoustical consultant during final design of the PA system. The consultant shall prepare a report detailing recommended measures to minimize special event and game noise to the degree feasible. Such measures may include, but are not limited to, construction of a sound wall along the property line to the east and/or relocation of the speakers/poles closer to the bleachers, thereby maximizing the distance between the speakers and nearby residences.
- During subsequent design phases of the bleachers and PA system, the District's sound system contractor shall create a track and field sound system design plan. The project's sound system design goal should optimize conveying information to the event attendees while minimizing off-site spill-over effects.
- Prior to the first sports field event, the public address system contractor shall perform a system check to verify appropriate sound levels in the seating areas and minimized spill-over sound in the adjacent community areas.

Figure 5.8-3 - Proposed Temporary Noise Barrier

5. Environmental Analysis

School Boundary

Project Boundary

Proposed Temporary Noise Barrier

0 400

Scale (Feet)

Source: Nearmap, 2020

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NOISE

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5.8.8 Level of Significance After Mitigation

Impact 5.8-1

Mitigation Measure N-1 would provide approximately 15 dBA reduction in construction noise levels, thereby reducing construction noise levels to 60 dBA or less at nearby sensitive receptors, which would not exceed the County's construction noise thresholds. Therefore, with mitigation, this impact would be reduced to less than significant.

Impact 5.8-2

Mitigation Measure N-2 would provide substantial reduction in operational special event and game noise, particularly through the consideration of a sound wall and/or relocation of the PA speaker locations. However, even with implementation of all feasible noise reduction measures, it is anticipated that noise levels would still exceed the Los Angeles County Exterior Noise Standards. Therefore, project operational noise levels may still cause substantial periodic increase above existing ambient noise levels without the project. This impact would conservatively remain significant and unavoidable.

5.8.9 References

California Department of Transportation (Caltrans). 2013a, September. Technical Noise Supplement (TeNS).

———. 2013b, September. *Transportation and Construction Vibration Manual.*

Federal Highway Administration (FHWA). 2006, August. *Construction Noise Handbook*.

Federal Transit Administration (FTA). 2018, September. *Transit Noise and Vibration Impact Assessment*.

Glendale, City of. June, 2007. "2005 Noise Contours." Figure 1 of the General Plan Noise Element. https://www.glendaleca.gov/government/departments/community-development/planning-division/city-wide-plans/noise-element.

KOA. 2021, January. Traffic Study for Crescenta Valley High School Field Improvement Project. [DEIR Appendix F]

Los Angeles, County of. 2020, April. Los Angeles County Code. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT12ENPR_CH12.08NOCO_PT2DE.

Los Angeles County Department of Regional Planning (LADRP). 2015, October 6. General Plan. http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan.pdf.

5. Environmental Analysis
NOISE

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5.9 PUBLIC SERVICES

This section addresses the proposed project's impacts to public services, including fire protection and emergency services and police protection. Public and private utilities and service systems, including water, wastewater, and solid waste services and systems, are addressed in the Initial Study. The Initial Study in Appendix A substantiates that impacts associated with public services would be less than significant for schools, parks, and libraries. These topics are not addressed in the following analysis. Public service correspondence is provided in Appendix E.

5.9.1 Fire Protection and Emergency Services

5.9.1.1 ENVIRONMENTAL SETTING

Regulatory Background

International Fire Code

The International Fire Code (IFC) regulates minimum fire safety requirements for new and existing buildings, facilities, storage, and processes. The IFC includes general and specialized technical fire and life safety regulations addressing fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, use and storage of hazardous materials, protection of emergency responders, industrial processes, and many other topics. The IFC is issued by the International Code Council, an international organization of building officials.

State

California Fire Code

The California Fire Code (CFC; California Code of Regulations, Title 24, Part 9) is based on the 2015 IFC and includes amendments from the State of California fully integrated into the code. The California Fire Code contains fire safety–related building standards that are referenced in other parts of Title 24 of the California Code of Regulations. The CFC is updated once every three years, and the 2016 CFC took effect on January 1, 2017.

California Health and Safety Code

Sections 13000 et seq. of the California Health and Safety Code include fire regulations for building standards (also in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8, Sections 1270, "Fire Prevention," and 6773, "Fire Protection and Fire Fighting Equipment," the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include but are not limited to, guidelines on the handling of highly combustible materials, fire house sizing

requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Local

Los Angeles County 2035 General Plan

The Los Angeles County 2035 General Plan includes the following goal and policies with regard to fire and emergency services in unincorporated communities in the county (Los Angeles County 2015).

- **Policy S 3.1:** Discourage high density and intensity development in Very High Fire Hazard Severity Zone (VHFHSZ)**.**
- **Policy S 3.2**: Consider climate change implications in fire hazard reduction planning for Fire Hazard Severity Zones (FHSZ).
- **Policy S 3.3**: Ensure that the mitigation of fire related property damage and loss in FHSZs limits impacts to biological and other resources.
- **Policy S 3.4**: Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire-resistant building materials, vegetation management, fuel modification and other fire hazard reduction programs.
- **Policy S 3.5**: Encourage the use of low-volume and well-maintained vegetation that is compatible with the area's natural vegetative habitats.
- **Policy S 3.6**: Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in FHSZs.
- **Policy S 3.7**: Site and design developments located within FHSZs, such as in areas located near ridgelines and on hilltops, in a sensitive manner to reduce the wildfire risk.
- **Policy S 3.8**: Support the retrofitting of existing structures in FHSZs to help reduce the risk of structural and human loss due to wildfire.
- **Policy S 3.9**: Adopt by reference the County of Los Angeles Fire Department Strategic Fire Plan, as amended.
- **Policy S3.10**: Map oak woodlands in Los Angeles County as part of implementation of the Oak Woodlands Conservation Management Plan.
- **Policy S 3.11**: Support efforts to address unique pest, disease, exotic species and other forest health issues in open space areas to reduce fire hazards and support ecological integrity.
- **Policy S 3.12**: Support efforts to incorporate systematic fire protection improvements for open space, including facilitation of safe fire suppression tactics, standards for adequate access for firefighting, fire mitigation planning with landowners and other stakeholders, and water sources for fire suppression.
- **Goal S 4**: Effective County emergency response management capabilities.
- **Policy S 4.1**: Ensure that residents are protected from the public health consequences of natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.
- **Policy S 4.2**: Support County emergency providers in reaching their response time goals.

- **Policy S 4.3**: Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.
- **Policy S 4.4:** Encourage the improvement of hazard prediction and early warning capabilities.
- **Policy S 4.5:** Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.
- **Policy S 4.6:** Ensure that essential public facilities are maintained during natural disasters, such as flooding.

Los Angeles County Code

The CFC and IFC are adopted with certain amendments by the County of Los Angeles in Title 32 of the County Code. The CFC sets forth requirements including emergency access, emergency egress routes, interior and exterior design and materials, fire safety features including sprinklers, and hazardous materials.

Existing Conditions

Fire Stations, Equipment, and Staffing

The County of Los Angeles Fire Department (LACFD) provides fire protection, paramedic, and emergency response services to the unincorporated community of La Crescenta-Montrose and the project site. According to the LACFD's 2017 Statistical Summary, there are 689 captains, 803 firefighter specialists, 676 firefighter paramedics, and 1,409 firefighters that staff 173 fire stations through LACFD's service area. Table 5.8-1, *Fire Stations and Equipment Serving the Project Site*, provides information regarding the fire station that responds to service requests in the project vicinity.

Table 5.9-1 Fire Station

Station	Address	Distance from Project Site	Apparatus	Daily Staffing
Fire Station #63	4526 Ramsdell Ave, La Crescenta-Montrose, CA 91214	0.5 mile from the project site	1 fire engine	3

Source: LACFD 2019.

Currently, LACFD's Fire Station 63 has an average emergency response time of 5:26 minutes and an average nonemergency response time of 6:28 minutes (LACFD 2019).

5.9.1.2 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:

FP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

5.9.1.3 ENVIRONMENTAL IMPACTS

Methodology

The potential impacts related to fire protection were evaluated based on the ability of existing and planned fire department staffing, equipment, and facilities to meet the additional demand for fire protection and emergency medical services resulting from development of the project. Impacts are considered significant if implementation of the proposed project would result in inadequate staffing levels or response times and/or increased demand for services that would require the construction or expansion of new or altered facilities that might have an adverse physical effect on the environment. For fire services, a significant impact could occur if the project generated the need for additional personnel or equipment that could not be accommodated within the existing stations and would require the construction of a new station or an expansion of an existing station.

Impact Analysis

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.9-1: The proposed project would introduce new structures into the LACFD's service boundaries, increasing the requirement for fire protection facilities and personnel. [Threshold FP-1]

The proposed project consists of the installation of permanent bleachers and new field lighting at the existing Crescenta Valley HS. Additional improvements would include a restroom and storage/maintenance buildings, a team room, a PA system, and a concession stand. The proposed improvements would result in additional usage of the project site during organized events and/or practices. The varsity football and other larger events currently occur at Glendale High School located 7 miles from Crescenta Valley HS which is served by the Glendale Fire Department. Due to the nature of the facilities proposed, there is potential that implementation of the proposed project would substantially increase the need for fire protection services, alter response times, or adversely affect LACFD's ability to provide service to the site using existing equipment and personnel.

The LACFD is the primary fire department providing service to the project site and would remain so under project implementation. LACFD Station 63 is approximately 0.5 mile south from the project site. The proposed project is not anticipated to have significant impacts on fire services. Currently, firefighters and personnel at LACFD Station 63 have an average emergency response time of 5:26 minutes and an average nonemergency response time of 6:28 minutes, and there are no existing deficiencies in fire protection service provided in the area around and including the project site. Section 5.10, *Transportation*, states that the District will implement an event traffic control plan to direct traffic flow and ensure public safety during major sporting events. With the implementation of the management plan, the proposed project would not result in adverse road conditions that would interfere with LACFD operations during an event of emergency or disaster. The proposed project would not have a significant impact on LACFD's ability to maintain adequate fire protection service in the area. Based on the review of the proposed project by the LACFD, there would be adequate facilities, equipment, and service personnel to respond in the event of an emergency at this location.

Based on the preceding, the proposed project would not adversely affect the LACFD's ability to provide adequate service and would not require new or expanded fire facilities that could result in adverse environmental impacts.

Level of Significance Before Mitigation: The project would not adversely affect fire services or require new or expanded fire facilities, and the impact is less than significant.

5.9.1.4 CUMULATIVE IMPACTS

Growth within the community would increase demands for fire protection and emergency services. The impacts of new development are evaluated on a case-by-case basis. If additional resources are needed due to continued development, the property taxes in the project area would provide funding to meet those needs. Cumulative impacts would be less than significant after payment of property taxes, and impacts of the proposed project would not be cumulatively considerable.

5.9.1.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.9-1.

5.9.1.6 MITIGATION MEASURES

No mitigation measures are required.

5.9.1.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.9.2 Police Protection

5.9.2.1 ENVIRONMENTAL SETTING

Regulatory Background

Los Angeles County 2035 General Plan

Based on a review of the Los Angeles County 2035 General Plan Safety Element, the County does not have specific goals and policies with regard to police protection.

Existing Conditions

Law enforcement service in the unincorporated community of La Crescenta-Montrose is provided by the Los Angeles County Sheriff's Department (LASD). The closest police station to the project site is the Crescenta Valley Sheriff's Station at 4554 Briggs Avenue, 0.7-mile northeast of the project site.

The Crescenta Valley Sheriff's Station currently employs 63 sworn personnel and 28 civilian employees. Sworn personnel include 1 captain, 1 operations lieutenant, 3 lieutenants/watch commanders, 1 operations

sergeant, 14 sergeants, 4 watch deputies, 4 field training officers, and 35 deputies (LASD 2020). LASD has established an optimal service response time of 10 minutes or less for emergency response incidents (a crime in progress and a life or death situation), 20 minutes or less for priority response incidents (a crime or incident in progress but not a life or death situation), and 60 minutes or less for routine response incidents (a crime that has already occurred and is not a life or death situation). In 2018-2019, LASD had an average response time of 3.5 minutes (Los Angeles 2019).

5.9.2.2 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:

PP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

5.9.2.3 ENVIRONMENTAL IMPACTS

Methodology

The potential impacts related to police services were evaluated based on the ability of existing and planned police department staffing, equipment, and facilities to meet the additional demand for law enforcement services resulting from development of the project. Impacts are considered significant if implementation of the proposed project would result in inadequate staffing levels or response times, and/or increased demand for services that would require the construction or expansion of new or altered facilities that might have an adverse physical effect on the environment. For police services, a significant impact could occur if the proposed project generated the need for additional personnel or equipment that could not be accommodated within the existing station and would require the construction of a new police station or an expansion of the existing police station.

Impact Analysis

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.9-2: The proposed project would introduce new structures into the LASD's service boundaries, thereby increasing the requirement for police protection facilities and personnel. [Threshold PP-1]

The proposed project consists of the redevelopment of existing track and field at Crescenta Valley HS to install permanent bleachers and new field lighting. Additional improvements would include a restroom and storage/maintenance buildings, a team room, and a concession stand. The proposed improvements would result in additional usage of the project site during organized events or practices, which are currently held at Glendale High School 7 miles south of the project site. Due to the nature of the facilities proposed, there is

potential that such conditions would potentially increase the need for sheriff protection services, alter response times, or adversely affect the department's ability to provide service to the site using existing equipment and personnel.

LASD has an average response time of 3.5 minutes, and the Crescenta Valley Sheriff Station currently has 63 sworn personnel and 28 civilian employees. The proposed project is not anticipated to have a significant impact on police services. Currently, there are no existing deficiencies in the level of police service provided to the area including and surrounding the project site. Additionally, as stated in Section 5.10, *Transportation*, the District will implement an event traffic control plan to direct traffic flow and ensure public safety during major sporting events. With the implementation of the management plan, the proposed project would not result in adverse road conditions that would interfere with LASD operations during an event of emergency or disaster. The proposed project would not have a significant impact on the ability to maintain adequate level of police protection service to the area.

Additionally, the proposed project would allow for home varsity football games to be held at Crescenta Valley HS and during major sporting events, the number of traffic and pedestrians would increase at the project site. However, as stated in Section 5.10, *Transportation*, the District would implement an event traffic control plan with school safety traffic control personnel stationed at the intersections to help improve traffic flow and ensure public safety during peak travel times to and from major sporting events held at Crescenta Valley HS. Therefore, the proposed project would not adversely affect the LASD's ability to provide adequate service and would not require new or expanded police facilities that could result in adverse environmental impacts. Impacts would be less than significant.

Level of Significance Before Mitigation: Less than Significant.

5.9.2.4 CUMULATIVE IMPACTS

Cumulative projects within Los Angeles County would require increased law enforcement services to serve new development. The impacts of new development are evaluated on a case-by-case basis. Development projects would be reviewed by LASD staff prior to development permit approval to ensure adequate security measures are provided for each site-specific development in the county. Operational funding for the LASD is derived from various types of tax revenue (property taxes, sales taxes, user taxes, vehicle license fees, deed transfer fees, etc.). If additional resources are needed due to increased development, the tax revenue from the project area would provide funding to meet those needs. Therefore, cumulative impacts associated with police services from implementation of the proposed project would be less than cumulatively significant.

5.9.2.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.9-2.

5.9.2.6 MITIGATION MEASURES

No mitigation measures required.

5.9.2.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.9.3 References

Los Angeles, County of. 2015. 2035 General Plan, Safety Element. Accessed October 4, 2019. http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan.pdf.

———. 2019. 2019-20 Performance Measures. https://ceo.lacounty.gov/wp-content/uploads/2019/12/2019-20-Performance-Measures.pdf.

Los Angeles County Fire Department (LACFD). 2019, September. Written response to service questionnaire. [DEIR Appendix E]

Los Angeles County Sheriff's Department. 2020, May 11. Email Correspondence with Los Angeles County Sheriff's Departmental Facilities Planner I. [DEIR Appendix E]

5.10 TRANSPORTATION

This section of the draft environmental impact report (DEIR) evaluates the potential for implementation of the Crescenta Valley High School Field Improvement project to result in transportation and traffic impacts in the unincorporated community of La Crescenta, Los Angeles County. The analysis in this section is based in part on the following technical report(s):

- *Transportation Assessment – Crescenta Valley High School Field Improvement Project*, KOA, January 2021

A complete copy of this study is in the technical appendices to this DEIR (Appendix F)

5.10.1 Environmental Setting

5.10.1.1 REGULATORY BACKGROUND

State

Assembly Bill 1358: The California Complete Streets Act

The California Complete Streets Act of 2008 (AB 1358) was signed into law on September 30, 2008. Beginning January 1, 2011, AB 1358 required circulation elements to address the transportation system from a multimodal perspective. The bill states that streets, roads, and highways must "meet the needs of all users in a manner suitable to the rural, suburban, or urban context of the general plan." Essentially, this bill requires a circulation element to plan for all modes of transportation where appropriate, including walking, biking, car travel, and transit.

The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled. For further clarity, AB 1358 tasked the Governor's Office of Planning and Research to release guidelines for compliance with this legislation by January 1, 2014. Senate Bill 375: Sustainable Communities and Climate Protection Act

The Sustainable Communities and Climate Protection Act (SB 375) was signed into law on September 30, 2008. The SB 375 regulation provides incentives for cities and developers to bring housing and jobs closer together and to improve public transit. The goal behind SB 375 is to reduce automobile commuting trips and length of automobile trips, thus helping to meet the statewide targets for reducing greenhouse gas emissions set by AB 32, the California Global Warming Solutions Act of 2006. SB 375 requires each metropolitan planning organization to add a broader vision for growth, called a "sustainable communities strategy" (SCS), to its transportation plan. The SCS must lay out a plan to meet the region's transportation, housing, economic, and environmental needs in a way that enables the area to lower greenhouse gas emissions. The SCS should integrate transportation, land use, and housing policies to plan for achievement of the regional emissions target.

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 emissions, as required by AB 32. Additionally, AB 1358, described above, 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 CEQA compliance. These changes include the elimination of auto delay, LOS, and similar measures of vehicular capacity or traffic congestion as the basis for determining significant impacts in many parts of California (if not statewide). 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" (Public Resources Code § 21099[b][1]). On January 20, 2016, the Governor's Office of Planning and Research released proposed revisions to its CEQA guidelines for the implementation of SB 743. OPR developed alternative metrics and thresholds based on VMT. The guidelines were certified by the Secretary of the Natural Resources Agency in December 2018, and automobile delay, as described solely by level of service of similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment. As of July 1, 2020, lead agencies are required consider VMT as the metric for determining transportation impacts. The guidance provided relative to VMT significance criteria is focused on 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

Southern California Association of Governments

The SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) provides a regional transportation plan for six counties in Southern California: Orange, San Bernardino, Riverside, Los Angeles, Ventura, and Imperial. The primary goal of the regional transportation plan is to increase mobility for the region. With recent legislation, this plan also encompasses sustainability as a key principle in future development. Current and recent transportation plan goals generally focus on balanced transportation and land use planning that:

- Maximize mobility and accessibility for all people and goods in the region.
- Ensure travel safety and reliability for all people and goods in the region.
- Preserve and ensure a sustainable regional transportation system.
- Maximize the productivity of our transportation system.
- Protect the environment and health of residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).
- Encourage land use and growth patterns that facilitate transit and active transportation.

On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020–2045 RTP/SCS), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The 2020-2045 RTP/SCS focuses on the continued efforts of the previous RTP/SCSs for an integrated approach in transportation and land uses strategies in development of the SCAG region through horizon year 2045. It projects that the SCAG region will meet the greenhouse gas per capita reduction targets established for the SCAG region of 8 percent by 2020 and 19 percent by 2035. Additionally, it is projected that implementation of the plan would reduce VMT per capita for year 2045 by 4.1 percent compared to baseline conditions for the year. The 2020-2045 RTP/SCS 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.

Local

Los Angeles County Metropolitan Transportation Authority

Los Angeles County Metropolitan Transportation Authority (Metro) serves as transportation planner and coordinator, designer, builder, and operator for Los Angeles County. Metro funds improvements to all modes of transportation through several programs, including the Transportation Improvement Program (TIP), Congestion Management Program, and Bicycle Transportation Strategic Plan. Metro operates rail and bus transit services throughout Los Angeles County.

Los Angeles County Congestion Management Program

The Los Angeles County Congestion Management Program (CMP) was a state-mandated program that was enacted by the California Legislature with the passage of Proposition 111 in 1990. It primarily used a level of service (LOS) performance metric, and SB 743 amends congestion management law to allow counties to opt out of the LOS standards that would otherwise apply in areas under the CMP. Pursuant to California Government Code Section 65088.3, local jurisdictions may opt out of the CMP requirement without penalty if a majority of the local jurisdictions representing a majority of the county's population formally adopt resolutions requesting to opt out of the program. As of November 2019, the majority of local agencies representing the majority of the county's population have adopted resolutions to opt out of the program. Therefore, the CMP is no longer applicable in Los Angeles County.

5.10.1.2 EXISTING ROADWAY NETWORK

Major roadways in the project traffic study area are described below. The discussion focuses on roadways that are approaches to the study intersections or directly affected by the proposed project.

- **Foothill Boulevard** is classified as an east-west Major Highway in the Los Angeles County Highway Plan. In the study area, the roadway provides two through travel lanes and a Class II bicycle lane in each

direction. On-street parking is permitted on both sides of the roadway. The posted speed limit is 40 miles per hour.

- **Glenwood Avenue** is classified as a north-south Local Street in the Los Angeles County Highway Plan. This roadway provides one travel lane in each direction. On-street parking is generally permitted on both sides of the roadway. The posted speed limit is 30 miles per hour.

- **La Crescenta Avenue** is classified as a north-south Secondary Highway by the Los Angeles County Highway Plan. This roadway provides two travel lanes in each direction south of Foothill Boulevard and one travel lane in each direction north of Foothill Boulevard. On-street parking is generally permitted on both sides of the roadway. The posted speed limit ranges from 25 to 35 miles per hour.

- **Prospect Avenue** is classified as an east-west Local Street in the Los Angeles County Highway Plan. This roadway provides one through travel lane in each direction. On-street parking is permitted on both sides of the roadway east of La Crescenta Avenue and west of Ramsdell Avenue. Between Glenwood Avenue and La Crescenta Avenue, on-street parking is restricted during school hours. The posted speed limit is 25 miles per hour.

- **Ramsdell Avenue** is classified as a north-south Local Street in the Los Angeles County Highway Plan. This roadway provides one through travel lane in each direction. On-street parking is generally permitted on both sides of the roadway, with parking prohibited on the east side of the street between Mary Street and Foothill Boulevard and on the west side of the street between Mary Street and Community Avenue. The posted speed limit ranges from 25 to 30 miles per hour.

Existing Public Transportation

The project site is served by bus transit lines operated by Los Angeles County Metro and the Glendale Beeline. The following is a description of the bus routes passing near the project site:

- **Metro Route 91.** Has approximately 30- to 50-minute frequencies and runs from Olive View-UCLA Medical Center to Downtown Los Angeles. Near the site the bus travels along Pennsylvania Avenue and Foothill Boulevard. The closest stop to the project site is at Ramsdell Avenue and Montrose Avenue.

- **Glendale Beeline Route 3.** Has approximately 15- to 30-minute frequencies and runs from Glendale Galleria to Jet Propulsion Laboratory. Near the site the bus travels along La Crescenta Avenue. The closest stop to the project site is at La Crescenta Avenue and Prospect Avenue.

Existing Parking

Crescenta Valley HS currently has five parking lots with a total of 122 parking spots. There are also 144 overflow parking spaces at nearby school sites and 1,097 off-site spaces on public streets in the vicinity of the school campus. Together, there are currently a total of 1,333 parking spaces.

5.10.1.3 METHODOLOGY

VMT Methodology

As described above, CEQA Guidelines Section 15064.3 was adopted on December 28, 2018, to provide guidance on addressing the determination of significance for transportation impacts. The CEQA Guidelines require that the analysis of transportation impacts be based on VMT instead of a congestion-based metric (such as level of service). The change in the focus of transportation analysis is the result of legislation (SB 743 as described above) and is intended to change the focus from congestion to, among other things, reduction in greenhouse gas emissions, encouraging mixed use development, and other factors. Pursuant to CEQA Guidelines Section 15064.3(c) this change in analysis became mandated beginning July 1, 2020. Therefore, this EIR contains an analysis of VMT. The District has not adopted a VMT threshold for use in determining significant transportation impacts under CEQA. This DEIR considers the four criteria identified in CEQA Guidelines Section 15064.3(b)(1-4) to analyze the project's transportation impacts. To determine how the project should be evaluated, each of the criteria considered.

1. Land Use Projects. VMT exceeding thresholds can indicate a significant impact. Projects within ½ mile of transit in in high quality transit areas would be less-than-significant, as would projects that decrease VMT. As discussed above, there are two bus routes that run within the vicinity of the project site. However, the proposed project is not located within 0.5 miles of a high quality transit area. The transit service in the vicinity of the proposed project does not meet these criteria, and the presumption would not apply to this project.
2. Transportation Projects. This criteria is not applicable to the proposed project as it is not a transportation-related criteria.
3. Qualitative Analysis. If models or methods are not available to estimate a project's VMT, a lead agency may address impacts qualitatively, considering factors such as transit, proximity to other destinations, etc. Special events such as full-capacity sporting events are temporary occurrences that are already occurring within the District and immediate vicinity. The proposed project would allow for Crescenta Valley HS events that generate VMT, which are currently held off-campus, to be relocated back to the campus serving those students. Therefore, for the purposes of this project, it has been determined that a qualitative analysis is appropriate.
4. Methodology. The lead agency has discretion to choose the most appropriate methodology to evaluate VMT impacts, and assumptions should be documented and explained.

Parking Analysis

A parking analysis was prepared to review the parking conditions in the vicinity of the school and to estimate the parking impacts from the proposed project. Parking counts were taken at the school parking lots and the surrounding local streets on a Friday evening. Parking demand was based on the same methodology for the trip generation, which assumed 85 percent of spectators arriving and departing via automobile and an average vehicle occupancy of 2.5 persons per vehicle.

5.10.2 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. (While this threshold was removed from the CEQA Guidelines in 2010, given public comments received during scoping, it has been included in this DEIR)

The Initial Study, included as Appendix A, substantiates that impacts associated with threshold T-2 and T-3 would be less than significant. However, comment letters that were received during the initial study's public review period raised concerns associated with transportation. In response to the comment letters, Thresholds T-1 through T-5 will be discussed further in this DEIR.

5.10.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.10-1: 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]

All roads in the vicinity of the school have paved sidewalks on both sides of the street. In addition, crosswalks are painted on all major intersections in the study area, such as intersections along Community Avenue and Ramsdell Avenue. The closest bikeway to the project site is a Class II bikeway along Foothill Boulevard. The existing sidewalk and crosswalks would provide for adequate pedestrian travel—accessing the project site on foot or parking on public streets and walking to the school. Pedestrian and bicycle facilities would not be impacted due to the proposed project.

During construction, the project may have the potential to cause temporary closure of the sidewalks adjacent to the athletic field, or increase safety hazards due to construction vehicles entering and exiting the project site (e.g., for delivery of building materials). Signage and/or workers conducting traffic would be present to direct pedestrians.

The proposed project site is primarily surrounded by residential uses, and the attendees of the field would continue to use the designated pedestrian routes that they currently use. While implementation of the proposed project would increase vehicular and pedestrian travel to the site during athletic events, the proposed project improvements would not include any new features that would introduce new hazards to pedestrian safety because no changes to existing roadways or pedestrian/bicycle accommodations would occur.

The proposed project would be confined to the project site and would not affect roadway facilities. No new roads or infrastructures (such as stop signs, traffic lights, traffic calming measures, etc.) would be installed under the proposed project.

Therefore, the proposed project would not conflict with a program, plan, ordinance, or policy regarding public transit, roadway, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Level of Significance Before Mitigation: Impacts would be less than significant.

Impact 5.10-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). [Threshold T-2]

As discussed previously, the proposed project would serve the existing and future students at Crescenta Valley HS. The proposed project would allow for already occurring larger sporting events such as varsity football games that are currently held at Glendale High School, approximately 7 miles from Crescenta Valley HS, to be relocated to Crescenta Valley HS, serving its own student population. The change in VMT as a result of this shift in vehicle trips cannot be precisely predicted. These trips are intermittent and infrequent in nature (depending on sports season, and no events during much of the calendar year). Any project-generated operational change in VMT would generally be associated with the redistribution of trips to and from these existing larger sporting events. With the implementation of the proposed project, trips generated by the

football games would originate and conclude at Crescenta Valley HS instead of Glendale High School. Therefore, the proposed project would result in a shift in travel patterns among local streets rather than an overall increase in trips compared to existing traffic levels.

The proposed project is a local-serving use, providing an improved sports facility primarily for teams and spectators from the local school district. The proposed project would not create any new regional trips, even for playoff and championship games, and those are contained within one season of the year. Travel by the visiting team and spectators would simply be to a new facility, rather than the current facility, and no new regional trips would be created, and average trip lengths would not increase. VMT would not increase as local spectators would be closer to the event, and for the visiting team spectators the regional trips generated would not be new trips and many of those trips would be shorter in length than they were before the project. The presence of an additional facility to serve its own student population would make most trips more efficient and lessened in length. Overall trips would be shorter in length and VMT would be lower, as the District and local area would now have an additional destination for larger sporting events that are already occurring.

For typical daily operations of the school, the proposed project would have no measurable effect on VMT. The project would not generate any outside vehicle trips when events are not scheduled, and would only be supporting the school use as an ancillary facility. Therefore, the proposed project would not result in a increase in VMT from existing conditions by allowing local spectators to be closer to the events. The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

Level of Significance Before Mitigation: Impacts would be less than significant.

Impact 5.10-3:	Project circulation improvements have been designed to adequately address potentially hazardous conditions (sharp curves, etc.), potential conflicting uses, and emergency access. [Thresholds T-3 and T-4]

No off-site improvements are proposed as part of the proposed project. No new access drives or roadway improvements are proposed to provide access to the project site; therefore, no improvements that may result in hazardous conditions would occur. Main access to the proposed fields would remain at the pedestrian gate (which also serves as emergency vehicle access) along Ramsdell Avenue at the southwestern portion of the Crescenta Valley HS campus. Parking for the field is in parking lots along Ramsdell Avenue and along streets in the surrounding neighborhoods. Additionally, the proposed project would not change the land use of the site, which currently supports sporting fields. The proposed project would not substantially increase hazards due to a design feature or incompatible uses.

Construction of the project would temporarily generate additional traffic on the existing area roadway network. These vehicle trips would include construction workers traveling to the site as well as delivery trips associated with construction equipment and materials. Delivery of construction materials to the site would likely require a number of oversized vehicles that may travel at slower speeds than existing traffic.

Because of the limited nature of the proposed improvements, a significant number of construction trips to/from the site is not anticipated. Once materials are delivered to the site, all construction activities would occur on-site within the existing boundaries of the school campus and would not disrupt off-site traffic flows. Lane closures are not anticipated, and no off-site roadway improvements are required or proposed that would have the potential to interrupt area circulation or redirect traffic. As such, project construction is not anticipated to substantially disrupt area traffic or cause a significant increase in daily traffic on area roadways or at local intersections, thereby adversely affecting existing conditions. Per standard construction procedures, the construction contractor would prepare and implement a traffic control plan to ensure that public safety and emergency access are maintained during the construction phase. Implementation of the traffic control plan would ensure that existing conditions are not adversely affected or substantially degraded by project construction.

No on-site improvements for purposes of vehicular access are proposed. The existing access lane is located on the southwestern edge of the project site. Therefore, emergency access to the field and associated improvements would be similar to what occurs under existing conditions and would be adequate to serve the site.

Level of Significance Before Mitigation: Impacts would be less than significant.

Impact 5.10-4: The proposed project would result in inadequate parking capacity. [Threshold T-5]

In order to assess parking demand at the proposed parking area, occupancy counts were conducted on a Friday evening during the same peak period as the traffic counts. The parking occupancy was monitored during this period in order to assess how much parking would likely be available for stadium attendees in on-street and off-street campus parking spaces.

As discussed previously, there are a total of 1,097 on-street parking spaces and 236 off-street parking spaces, for a total of 1,333 parking spaces. Parking zones used to conglomerate data and provide a picture of subareas of the total parking study area are as follows:

- **Zone 1:** On-street parking on roadways that directly border the campus, including Ramsdell Avenue, Community Avenue, Prospect Avenue, and Altura Avenue.
- **Zone 2:** Local roadways one to two blocks away from the campus, extending to the east side of Cloud Avenue in the west, the south side of Foothill Boulevard in the north, and La Crescenta Avenue (both sides) in the east.
- **Zone 3:** Local roadways west of Cloud Avenue (including the west side of Cloud Avenue), north of Foothill Boulevard (including the north side of Foothill Boulevard) and east of La Crescenta Avenue

A summary of the results of the parking occupancy is shown in Table 5.10-1, *Parking Availability in the Study Area*. As shown, there are 901 parking spaces (236 off-street and 665 on-street) available within the vicinity of the project site. Figure 5.10-1, *Parking Supply and Occupancy, Existing Conditions*, shows the distribution of occupants in the study area under existing conditions.

Table 5.10-1 Parking Availability in the Study Area

Location	Number of Spaces	Occupied Spaces	Unoccupied spaces	Occupancy (%)
Zone 1	202	104	98	51%
Zone 2	537	259	278	48%
Zone 3	358	69	289	19%
School and Overflow Lots	236	0	236	0%
Total	1,333	432	901	32.4%

Source: KOA 2019.

Using the same assumptions as for project trip generation, the total estimated parking demand is 1,053 spaces. With the 236 spaces that can be provided in school or overflow parking facilities, the estimated demand spillover onto adjacent on-street parking areas within the neighborhood is 817 vehicles without additional arrangements. Based on distances from the project site, the following potential distribution to the parking study zones would occur:

- 98 vehicles to Zone 1, resulting in 100 percent occupancy, increased from 51 percent
- 278 vehicles to Zone 2, resulting in 100 percent occupancy, increased from 48 percent
- 289 vehicles to Zone 3, resulting in 100 percent occupancy, increased from 19 percent

As a result, the overall area parking occupancy would be 100 percent. Figure 5.10-2, *Parking Supply and Occupancy, With Project Conditions*, shows the distribution of occupants in the study area with project conditions. With the remaining needed vehicles spilling into the unoccupied off-street parking spaces, there is still a deficiency of 205 parking spaces.

Therefore, the parking demand from the project cannot be fully absorbed by the available parking supply at the school lots and on public streets.

Level of Significance Before Mitigation: Impacts would be potentially significant.

5.10.4 Cumulative Impacts

The committed and cumulative projects lists are included and discussed in Table 5 of the Traffic Study (Appendix F to the DEIR) and Chapter 4.4 of this EIR, and illustrated in Figure 5.10-2, *Cumulative Projects Map*. Cumulative project impacts were analyzed when the proposed project was combined with other future developments to evaluate the overall traffic impacts. Cumulative changes in VMT would be caused by other development and roadway and transit infrastructure projects in the region, separate from project effects on VMT. As the proposed project is not expected to create VMT impacts that would be specific to the proposed project, it would not be contributing to any cumulative VMT impacts in the region. Therefore, the proposed project would be less than cumulatively significant.

5.10.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.10-1, 5.10-2, and 5.10-3.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.10-4 The proposed project would result in an insufficient number of parking spaces.

5. Environmental Analysis
TRANSPORTATION

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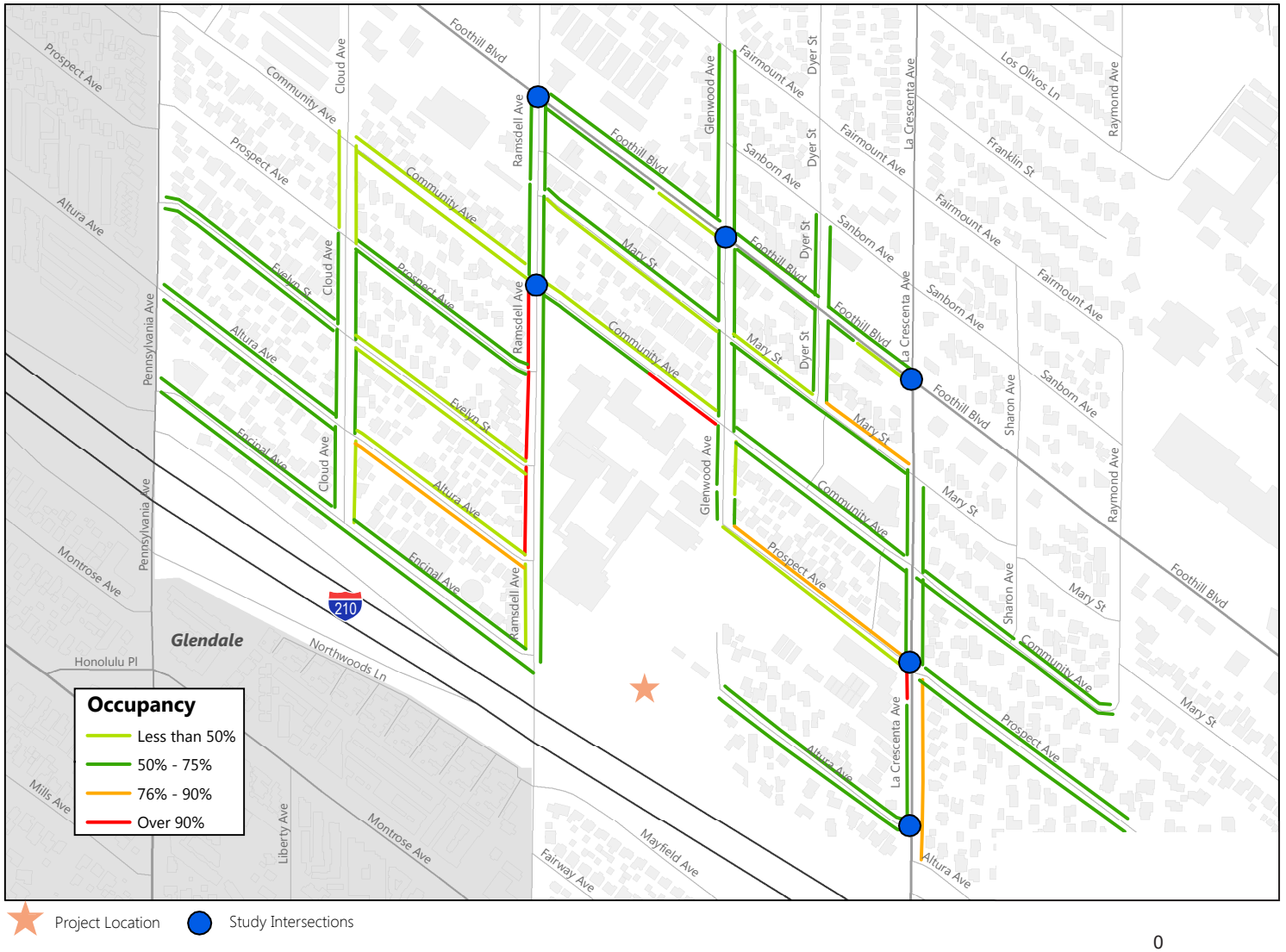
Figure 5.10-1 - Parking Supply and Occupancy - Existing Conditions

5. Environmental Analysis



Source: KOA, 2020

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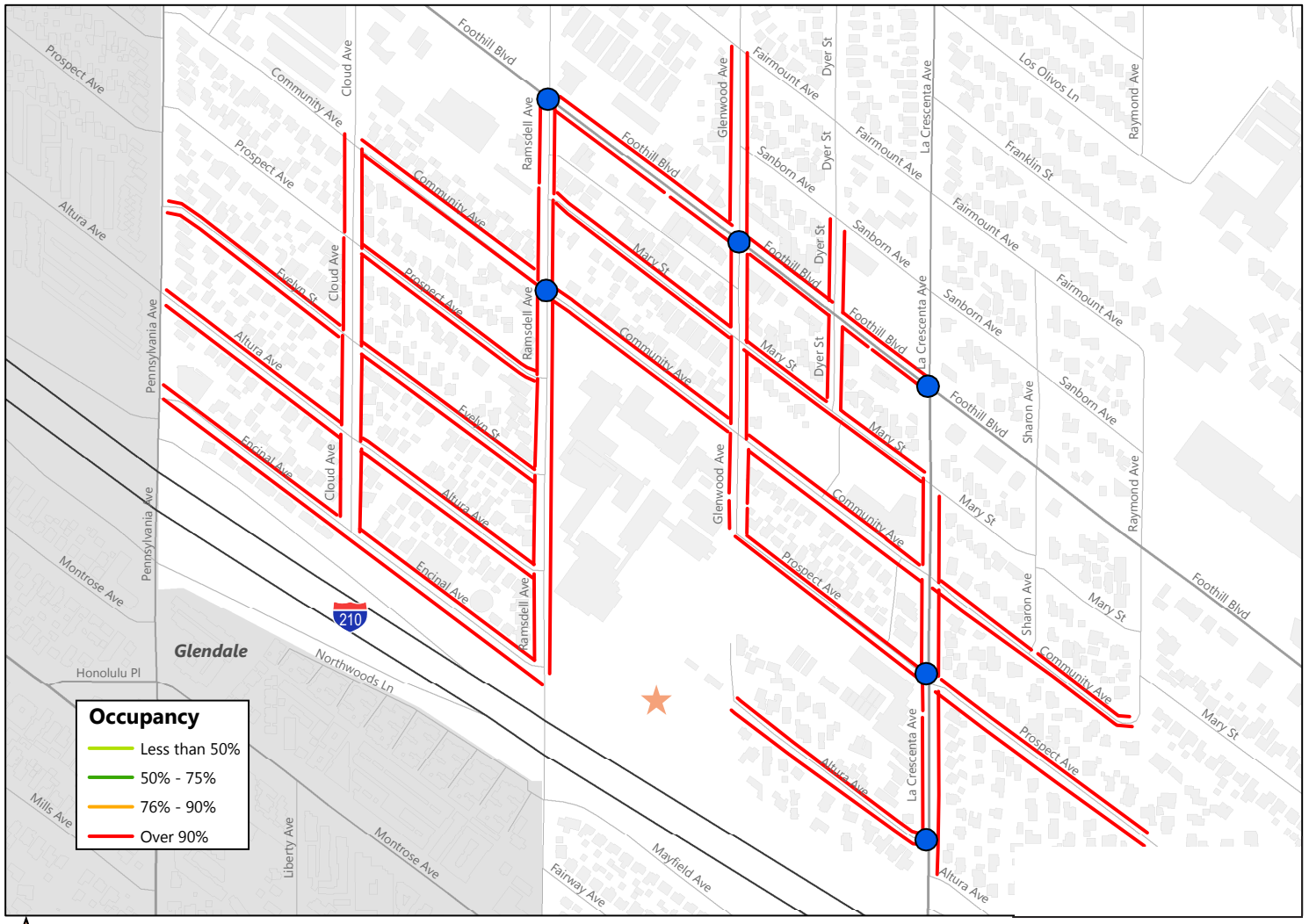
Figure 5.10-2 - Parking Supply and Occupancy - With Project Conditions

5. Environmental Analysis



Source: KOA, 2020

5. Environmental Analysis
TRANSPORTATION

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5.10.6 Mitigation Measures

Impact 5.10-4

T-1 Prior to any ground disturbing activities, the District shall prepare an event traffic control plan. The plan shall be implemented during major sporting events held at CVHS (e.g., where near-full or full capacity is anticipated, such as at varsity or championship football games). The plan shall require that, immediately prior to each major sporting event, documentation of all available off-street parking supplies and temporary signage be placed at appropriate, pre-determined locations along local streets in the vicinity of available event parking areas. The plan shall also determine additional parking spaces at nearby vacant or underutilized parking lots and require that District school safety traffic control personnel be available to direct event traffic to and from available designated parking areas. The traffic officers shall be stationed at the intersections to help improve traffic flow and ensure public safety during peak travel times to and from major sporting events held at CVHS. All temporary directional signage shall be removed by traffic control personnel following each major stadium event.

5.10.7 Level of Significance After Mitigation

Impact 5.10-4

The proposed project would result in deficient parking spaces, and Mitigation Measure T-1 would require the District to look at the potential for using parking lots nearby for event parking. Discussion on the additional parking spaces at private lots will be determined dependent on the discussions between the owner and the District. At this time, the feasibility of the availability of additional parking spaces at private lots cannot be determined. Therefore, impacts to parking would remain significant and unavoidable.

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5.11 WILDFIRE

Wildfire risk is defined here as the likelihood of a fire times the consequences of a fire, where consequences include the intensity of a fire; resources—such as people, structures, cultural resources, habitat, and forestry resources—exposed to a fire; and the effects of a fire on those resources. Wildfire likelihood and intensity are considered together qualitatively as wildfire potential, which depends on three main factors: fuel (wildland vegetation), topography, and weather. The discussion of effects in this section focuses on adverse effects of wildfires.

5.11.1 Environmental Setting

5.11.1.1 REGULATORY BACKGROUND

State

California Department of Forestry and Fire Protection

The Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. The Office of the State Fire Marshal supports the CAL FIRE mission to protect life and property through fire prevention engineering programs, law and code enforcement, and education. The State Fire Marshal provides for fire prevention by enforcing fire-related laws in state-owned or -operated buildings, investigating arson fires in California, licensing those who inspect and service fire protection systems, approving fireworks as safe and sane for use in California, regulating the use of chemical flame retardants, evaluating building materials against fire safety standards, regulating hazardous liquid pipelines, and tracking incident statistics for local and state government emergency response agencies. Classification of a zone as moderate, high, or very high fire hazard is based on a combination of how a fire will behave and the probability of flames and embers threatening buildings. Each area of the map gets a score for flame length, embers, and the likelihood of the area burning. Scores are then averaged over the zone areas. Final zone class (moderate, high, and very high) is based on the average scores for the zone (CAL FIRE 2007a).

The Board of Forestry and Fire Protection (Board) is a government-appointed body within CAL FIRE. It is responsible for developing the general forest policy of the state, determining the guidance policies of CAL FIRE, and representing the state's interest in federal forestland in California. Together, the Board and CAL FIRE work to carry out the California Legislature's mandate to protect and enhance the state's unique forest and wildland resources.

The Board is charged with protecting all wildland forest resources in California that are not under federal jurisdiction. These resources include major commercial and non-commercial stands of timber, areas reserved for parks and recreation, woodlands, brush-range watersheds, and all private and state lands that contribute to California's forest resource wealth.

2018 Strategic Fire Plan for California

The Board has adopted strategic fire plans for California since the 1930s and periodically updates them to reflect current and anticipated needs of California's wildland. The plan is the state's road map for reducing the risk of wildfire through planning and prevention to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. It is adopted to better respond to the changes of the environmental, social, and economic landscape of California's wildlands and to provide CAL FIRE with appropriate guidance for adequate statewide fire protection of state responsibility areas. The latest Strategic Fire Plan is dated August 22, 2018.

CAL FIRE implements and enforces the Board's policies and regulations. The 2018 Strategic Fire Plan reflects CAL FIRE's focus on (1) fire prevention and suppression activities to protect lives, property, and ecosystem services, and (2) natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation.

California Office of Emergency Services

The California Emergency Management Agency was incorporated into the Governor's Office on January 1, 2009, by Assembly Bill (AB) 38 (Nava), and merged the duties, powers, purposes, and responsibilities of the Governor's Office of Emergency Services (Cal OES) with those of the Governor's Office of Homeland Security. Cal OES is responsible for the coordination of overall state agency response to major disasters in support of local government. The agency is responsible for ensuring the state's readiness to respond to and recover from all hazards—natural, man-made, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

The Cal OES Fire and Rescue Division coordinates statewide response of fire and rescue mutual aid resources to all types of emergencies, including hazardous materials. The Operations Section under the Fire and Rescue Division coordinates the California Fire and Rescue Mutual Aid System, and coordinated response through the Mutual Aid System includes responses to major fires, earthquakes, tsunamis, hazardous materials, and other disasters.

California Building Code

The State of California provides a minimum standard for building design through Title 24 of the California Code of Regulations (CCR), commonly referred to as the "California Building Code" (CBC). The CBC is updated every three years, and the current 2019 CBC went into effect in January 2020. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The CFC incorporates by adoption the International Fire Code with California amendments (24 CCR Part 9). The CFC is updated every three years, and the current 2016 CFC went into effect January 1, 2017. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. The CFC regulates building standards in the CBC, fire department access, fire protection systems and devices, fire and explosion hazards safety, hazardous materials storage and use, and standards for building inspection. The Orange County Fire Authority (OCFA) provides fire protection services for the City of San Juan Capistrano and therefore implements and enforces the CFC at the project site.

California Public Resources Code

California Public Resources Code (PRC) Sections 4291 et seq. require removal of brush, flammable vegetation, or combustible growth within 100 feet of buildings on or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land covered in flammable materials.

PRC Section 4290 requires the State Board of Forestry and Fire Protection to adopt regulations implementing minimum fire safety standards for defensible space that would be applicable to lands within state responsibility areas and lands within very high fire hazard severity zones.

Fire Hazard Severity Zones and Responsibility Areas

CAL FIRE publishes maps recommending fire hazard severity zones for every California county. The maps identify lands within one of three management areas: Local Responsibility Area (LRA), State Responsibility Area (SRA), or Federal Responsibility Area (FRA). Within each of these areas, a single agency has direct responsibility: in LRAs, local fire departments or fire protection districts are responsible; in SRAs, CAL FIRE is responsible; in FRAs, federal agencies such as the United States Forest Service, National Park Service, Bureau of Land Management, United States Department of Defense, United States Fish and Wildlife Service, and Department of the Interior are responsible.

Within the LRA, CAL FIRE designates lands as being within a very high fire hazard severity zone (FHSZ) or not within a very high FHSZ. The LRA maps show the very high FHSZs and other areas within the SRA and FRA, but do not differentiate lands in the SRA from land in the FRA.

Local

Los Angeles County Fire Department Strategic Fire Plan

Los Angeles County developed a strategic fire plan to reduce the threats to life and property from future wildfire. The plan uses the California Fire Plan as the primary wildland fire protection plan. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative interdependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis. The goals of the strategic fire plan are:

- Analyze the potential of wildfire threats to communities at the battalion level within and adjacent to the WUI [wildland-urban interface].
- Prioritize within each battalion where hazardous fuel reduction projects can make the largest impact to protection of life, property, and natural resources.
- Identify, categorize, and prioritize through a detailed assessment the values and assets at risk at the battalion level.
- Establish and prioritize which battalions have the highest wildfire threat potential in regard to values and assets.
- Develop battalion specific maps identifying prioritized values and assets and at-risk communities.
- Develop battalion specific strategies and tactics within our own strategic fire plan.
- Determine large scale fire prevention strategies which parallel the County's land use planning strategies.
- Continue to reach out and assist with communities at risk to establish local Fire Safe Councils and establish appropriate defensible space.
- Continue to work with communities at risk to develop Community Wildfire Protection Plans. (Los Angeles County 2018)

Los Angeles County General Plan

The following goal and policies in the Safety Element (Fire Hazards and Emergency Response) are relevant to the proposed project:

Goal S 3: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.

- **Policy S 3.4:** Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire-resistant building materials, vegetation management, fuel modification and other fire hazard reduction programs.
- **Policy S 3.5:** Encourage the use of low-volume and well-maintained vegetation that is compatible with the area's natural vegetative habitats.
- **Policy S 3.9:** Adopt by reference the County of Los Angeles Fire Department Strategic Fire Plan, as amended.

Goal S 4: Effective County emergency response management capabilities.

- **Policy S 4.1:** Ensure that residents are protected from the public health consequences of natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.
- **Policy S 4.2:** Support County emergency providers in reaching their response time goals.
- **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.
- **Policy S 4.5:** Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.
- **Policy S 4.6:** Ensure that essential public facilities are maintained during natural disasters, such as flooding (Los Angeles County 2015).

Los Angeles County Code

The Los Angeles County Code includes various directives to minimize adverse impacts associated with wildfires in the county. Provisions related to wildfire prevention are in:

- Title 20, Utilities, Section 20.16.060
- Title 21, Subdivisions, Chapter 21.24, Part 1
- Title 21, Subdivisions, Section 21.24.220
- Title 21, Subdivisions, Section 21.44.250
- Title 26, Building, Chapter 7A
- Title 32, Fire, Section 325
- Title 32, Fire, Section 328.10
- Title 32, Fire, Section 4907.1
- Title 32, Fire, Sections 4908, 1117.2.1

5.11.1.2 EXISTING CONDITIONS

Type of Wildfire

There are three basic types of wildland fires:

- **Crown fires** burn trees to their tops; these are the most intense and dangerous wildland fires.
- **Surface fires** burn surface litter and duff. These are the easiest fires to extinguish and cause the least damage to the forest. Brush and small trees enable surface fires to reach treetops and are thus referred to as ladder fuels.
- **Ground fires** occur underground in deep accumulations of dead vegetation. These fires move very slowly but can be difficult to extinguish. (Natural Resources Canada 2019)

Wildfires burn in many types of vegetation—forest, woodland, scrub (including chaparral, sage scrub, and desert scrub), and grassland. Many species of native California plants are adapted to fire. Chaparral shrubs recover from fire in two ways: 1) woody root crowns or burls below the soil surface survive a fire and resprout; and 2) shrubs (various species of Manzanita and Ceanothus) produce seeds requiring intense heat from a fire to germinate (Santa Barbara City College 2010). Many species of conifers have seed cones requiring fire to open. Between 2010 and 2017 wildfires in California burned about 265,000 acres of forest land, 207,000 acres of shrub vegetation, 99,000 acres of grassland, 18,000 acres of desert vegetation, and 14,000 acres of other vegetation types (CAL FIRE 2018).

Wildfire Causes

Although the term wildfire suggests natural origins, a 2017 study that evaluated 1.5 million wildfires in the United States between 1992 and 2012 found that humans were responsible for igniting 84 percent of wildfires, accounting for 44 percent of acreage burned (Balch et al. 2017). The three most common types of human-caused wildfires are debris burning (logging slash, farm fields, trash, etc.), arson, and equipment use (NPS 2019). Lightning is another major natural cause of wildfire in the United States (Balch et al. 2017).

Wildfire season in the West has recently lengthened from an average of between five and seven months to year-round (CAL FIRE 2018), and the number of large wildfires (i.e., greater than 1,000 acres) has increased from 140 to 250 per year. At the same time, average annual temperatures in the West have risen by nearly two degrees Fahrenheit since the 1970s, and the winter snow pack has declined. Increases in acres burned can now be attributed in part to climate change (GOES 2018). Los Angeles County experiences destructive wildland fires almost every year.

Secondary Effects

Secondary effects of wildfire include debris flows postfire and air pollution due to smoke. The following sections describe the hazardous conditions created by these secondary wildfire effects.

Debris Flows

Postfire landslide hazards include fast-moving, highly destructive debris flows that can happen immediately after wildfires in response to high intensity rainfall or are generated over longer time periods by root decay and loss of soil strength. Postfire debris flows are particularly hazardous because they can occur with little warning, sweep away objects in their paths, strip vegetation, block drainage ways, damage structures, and endanger human life. Fires increase the potential for debris flows in two ways:

- Fires may bake soil into a hard crust that repels water.
- Fires destroy vegetation that would slow and absorb rainfall and whose roots would help stabilize soil. (USGS 2018)

Postfire debris flows are most common in the two years after a fire, usually triggered by heavy rainfall. It takes much less rainfall to trigger debris flows from burned basins than from unburned areas. In southern California, as little as 0.3 inch of rainfall in 30 minutes has triggered debris flows, and any storm that has

intensities greater than about 0.4 inch per hour can produce debris flows (USGS 2005). The burning of vegetation and soil on slopes more than doubles the rate that water will run off into watercourses (CGS 2020).

Air Pollution

Smoke is made up of a complex mixture of gases and fine particles. The biggest health threat from smoke is from fine particles, which can penetrate the lungs and can cause a range of health problems, from burning eyes and a runny nose to aggravated chronic heart and lung diseases. Exposure to particulate pollution is even linked to premature death. Some populations are more sensitive than others to smoke, for instance, people with heart or lung diseases, the elderly, children, people with diabetes, and pregnant women (Airnow 2017).

Wildfire History and Potential

The Los Angeles County All-Hazard Mitigation Plan identified 14 wildfire incidents in Los Angeles County from 2007 to 2010. One of these, the Station Fire of 2009, was close to the project site (Los Angeles County 2014).

The proposed project is not in an SRA or LRA or on land classified as a very high FHSZ, as identified in the Los Angeles County Fire Hazard Severity Zone Map (CAL FIRE 2007b). The nearest SRA FHSZ is approximately 1.25 miles north and the nearest LRA FHSZ is 0.43 mile south. Land between the edge of the nearest FHSZ and the project site is dense urban development, along with Interstate 210.

According to Cal OES, a WUI is defined as any area where structures and other human development meet or intermingle within wildland vegetation (Cal OES 2018). There are two types of WUI areas: interface and intermix. Interface WUIs are areas with housing in the vicinity of contiguous wildland vegetation; intermix WUIs are areas where housing and vegetation intermingle. As identified in the Wildland-Urban Interface Change 1990–2010 map, the proposed project is in an intermix WUI area (University of Wisconsin- Madison 2010).

Fire Protection Resources

The Los Angeles County Fire Department (LACFD) provides fire protection and emergency medical services to the project site. The closest fire station is Fire Station #63 at 4526 Ramsdell Ave, approximately 0.3 mile north of the site. The fire station is equipped with one fire engine and three staff. Currently, Fire Station 63 has an average emergency response time of 5:26 minutes and an average nonemergency response time of 6:28 minutes (LACFD 2019).

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if located in or near state responsibility areas or lands classified as very high fire hazard severity zones the project would:

W-1 Substantially impair an adopted emergency response plan or emergency evacuation plan.

W-2 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.

W-3 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.

W-4 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.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold W-2
- Threshold W-3
- Threshold W-4

These impacts will not be addressed in the following analysis.

5.11.3 Environmental Impacts

5.11.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.11-1: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. [Threshold W-1]

This impact was analyzed in Section 5.6, *Hazards and Hazardous Materials*, as Impact 5.6-1 and found less than significant. Implementation of the proposed project would not have a significant impact on implementation of the Los Angeles Emergency Operations Plan. Additionally, as stated in Section 5.10, *Transportation*, the District will implement an event traffic control plan to direct traffic flow and ensure public safety during major sporting events. With the implementation of the management plan, the proposed project would not result in road conditions that would interfere with emergency responders. Therefore, the proposed project would not impair an adopted emergency response plan or emergency evacuation plan.

Level of Significance Before Mitigation: Impact would be less than significant.

5.11.4 Cumulative Impacts

The project site is not in a very high FHSZ in an LRA or SRA, and the area for cumulative impacts is land in Los Angeles County that is in high and very high FHSZs in LRAs and SRAs, since wildfire can spread rapidly across city and county limits. Implementation of the proposed project, combined with other projects in Los

Angeles County, would not result in increased wildfire hazard risks. Implementation of the proposed project combined with other development in Los Angeles County would not result in increased exposure to wildfire risks. Urban development projects that are constructed in compliance with the CBC and CFC would ensure that appropriate measures are provided, including fire prevention and fuel modification features, so that developments do not expose project occupants to increased and uncontrolled wildfire hazards. The proposed project is surrounded by urban development and served by existing infrastructure; therefore, its development would not contribute incrementally with other projects in Los Angeles County to create an environment that could exacerbate wildfire risks. Cumulative wildfire hazard impacts would be less than significant.

5.11.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, impact 5.11-1 would be less than significant.

5.11.6 Mitigation Measures

No mitigation measures are required.

5.11.7 Level of Significance After Mitigation

Impact would be less than significant.

5.11.8 References

Airnow. 2017, January. How Smoke from Fires Can Affect Your Health. https://airnow.gov/index.cfm?action=smoke.index.

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6. Significant Unavoidable Adverse Impacts

At the end of Chapter 1, *Executive Summary*, is a table that 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.

6.1 AESTHETICS

Impact 5.1-2

Light levels would exceed the 0.5 foot-candle threshold and the proposed project would result in new lighting that would intrude on neighboring residential uses and could affect nighttime views. Mitigation measure AE-1 would reduce potential impacts associated with light trespass to the extent feasible. The requirement that the light be shielded and aimed to reduce light trespass to the greatest extend possible would minimize the impact; however, significant levels of light from the proposed project would still spill onto adjoining residential uses and would result in a significant unavoidable adverse impact.

6.2 NOISE

Impact 5.8-2

Operation-generated noise levels during special events and games would exceed the existing ambient noise levels by more than 10 dBA, and the proposed project would result in temporary noise levels near sensitive receptors. Mitigation measure N-2 would reduce potential impacts associated with operational activities to the extent feasible. Development of a Noise Control Plan and Track and field Sound System Design Plan would minimize the impact; however, short-term operational-generated noise levels during events would still cause substantial periodic increase above existing ambient noise levels and would result in a temporary significant and unavoidable impact.

6.3 TRANSPORATION

Impact 5.10-4

There is a deficiency in parking spaces during special events and games, and the proposed project would result in inadequate parking capacity. Mitigation measure T-1 would reduce potential impacts associated with parking to the extent feasible. The event traffic control plan would look for potential parking lots for event use to minimize the parking impact; however, since it is not feasible to determine the availability of additional parking spaces at this time, the proposed project would result in a significant and unavoidable impact.

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 § 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." (15126.6[b])

- "The specific alternative of 'no project' shall also be evaluated along with its impact." (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." (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." (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, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (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." (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." (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 Section 3.2, 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 lighting to allow night use of the track and field to accommodate school-related events and activities.
2. Provide bleachers with adequate capacity to accommodate various spectator events currently held on and off campus.
3. Utilize existing space to enhance opportunities for after-school athletic and extracurricular activities.
4. Enhance sense of community by allowing home football games to occur on campus.
5. 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 Development Areas

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 § 15126[5][B][1]).

7.2.1.1 ALTERNATIVE BLEACHER DESIGN

This alternative would place the home bleachers along the north side of the track and field and two portable bleachers along the east and west side of the track and field. The home bleachers would have a seating capacity of 3,396 while the portable bleachers would provide for 420 seats, for a total of 4,236 seats. This design would increase noise impacts to nearby residential uses by decreasing the distance between the uses and was deemed infeasible. Moreover, the alternative would also require more parking spaces and increase traffic impacts due to the increase in seating capacity. This design may also result in an increase in conflicts among rival team spectators. Therefore, this alternative was considered, but rejected as infeasible.

7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Based on the criteria listed above, the following two alternatives have been determined to represent a reasonable range of alternatives with 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 project. These alternatives are analyzed in detail in the following sections.

- No Project Alternative
- Bleacher and Field Improvements with No Lighting Alternative

An EIR must identify an "environmentally superior" alternative, and where the No Project Alternative is identified as environmentally superior, the EIR is required to identify as environmentally superior an 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. However, only those impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Of the impacts assessed involving air quality, energy, greenhouse gas emissions, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and public services (fire and police), three impacts were found to be significant and unavoidable—nighttime light trespass, operational noise, and transportation and parking. Section 7.7 identifies the environmentally superior alternative.

7.4 NO PROJECT ALTERNATIVE

The CEQA Guidelines requires the analysis of a No Project Alternative. 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 proposed permanent bleachers with 3,442 seats, four 100-foot light poles, 540-square-foot concession stand, 2,254-square-foot home team room, restroom, public address (PA) system, and storage/maintenance building would not be constructed. The existing track and field would continue to be

used only during the daytime—by CVHS physical education and school sports programs, and by permitted outside sporting groups on weekends. This alternative would not meet any of the project objectives.

7.4.1 Aesthetics

Under this alternative, no structural or any other visual changes to the existing Crescenta Valley HS campus facilities would occur, and no nighttime lighting would be installed. There would be no changes to the physical environment, and no light and glare impacts would occur. This alternative is environmentally superior to the proposed project.

7.4.2 Air Quality

No construction would be required under this alternative; therefore, no construction-related air quality impacts would occur. Operation would remain as is with no new vehicle trips or emissions; therefore, no operational-related air quality impacts would occur. The No Project Alternative is environmentally superior to the project during construction, and comparable during operation.

7.4.3 Energy

Under this alternative, no construction of new buildings would occur. Therefore, energy demand for electricity and fuel consumption would remain as is. No operational energy resources would be used for field lighting or traffic; therefore, no operational-related energy impact would occur. The No Project Alternative is environmentally superior to the project during construction, and comparable during operation.

7.4.4 Geology and Soils

No new construction activities, including grading, would occur under the No Project Alternative. Therefore, there would be no potential for additional workers and structures to experience seismic ground shaking, liquefaction, lateral spreading, subsidence, or collapse within the project site. This alternative would not result in impacts to paleontological resources since no grading would occur. This alternative is environmentally superior to the proposed project.

7.4.5 Greenhouse Gas Emissions

Under this alternative, no bleachers, lighting systems, concession stand, home team room, or restroom/storage building would be developed. Therefore, the projected GHG emissions from construction and on-site energy uses would be less than the proposed project. This alternative is environmentally superior to the proposed project.

7.4.6 Hazards and Hazardous Materials

Because no development would occur under the No Project Alternative, no impacts related to hazards or hazardous materials would occur. This alternative is environmentally superior to the proposed project.

7.4.7 Hydrology and Water Quality

Existing water quality conditions, groundwater supplies, drainage patterns, and runoff water amounts would remain the same under this alternative because no new development would occur. This alternative would not introduce new sources of water pollutants from either the construction or operation phases of development to the project site, because no new development would occur. This alternative is environmentally superior to the proposed project.

7.4.8 Noise

No construction noise impact would occur under this alternative; however, construction noise impacts resulting from the proposed project would be temporary and would cease upon completion of construction. Under this alternative, field use would continue only during daytime hours and no PA system would be installed. Event-generated noise would not occur in excess of identified noise thresholds at the residences adjacent to Crescenta Valley HS. Because the proposed project would expose residences to increased nighttime noise in exceedance of identified thresholds, this alternative is environmentally superior to the proposed project.

7.4.9 Public Services

Varsity games would continue to be held at Glendale High School under the No Project alternative. Therefore, there would be no increase in demand for fire or police services. Although the proposed project's impacts related to fire and police services were determined to be less than significant, the public services impacts would be slightly reduced under this alternative compared to the proposed project.

7.4.10 Transportation

The No Project Alternative would eliminate additional traffic volumes and parking demands on streets surrounding CVHS presented as part of the proposed project. The existing daily trips would remain at current conditions and all roadway segments and intersections would maintain existing levels of service and vehicle miles travelled. Because of the reduction in localized traffic compared to the proposed project, the No Project Alternative is considered environmentally superior.

7.4.11 Wildfire

The project site is not in a state or local responsibility area (SRA or LRA) or land classified as a very high fire hazard severity zone, but it is located within an wildland-urban intermix area. The project site is already developed high school campus, and would not require installation of infrastructure or modification to existing slopes in a way that would exacerbate fire risk or increase flooding or landslides, and would not exacerbate pollution from wildfires. No construction would occur under this alternative, and operational would remain as is; therefore, no impact to emergency response or evacuation plan during construction or operation would occur. Therefore, although the proposed project's impacts related to wildfire were determined to be less than significant, this alternative would slightly reduce impacts related to wildfire.

7.4.12 Conclusion

The No Project alternative would lessen environmental impacts in the areas of construction air quality, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, public services (fire and police), transportation, and wildfire, and avoid the nighttime lighting, operational noise, and traffic and parking impacts. This alternative would be considered environmentally superior to the proposed project. However, the No Project alternative does not meet any of the project objectives.

7.5 BLEACHER AND FIELD IMPROVEMENTS WITH NO LIGHTING

This alternative would provide a track and field with bleachers with no nighttime lighting. All other aspects of the proposed project would remain the same, including the development of new bleachers with 3,442 seats, concession stand, home team room, scoreboard, PA system, and restroom and storage/maintenance building(s). Operation of the Crescenta Valley HS field would continue as in existing conditions, and under the existing joint use agreement, outside sporting groups would continue to be individually permitted by Glendale Unified School District (GUSD) to use the practice field on weekends, generally between the hours of 8:30 am and 6:00 pm on Saturdays and 8:00 am and 6:00 pm on Sundays. This alternative would eliminate any aesthetic impacts from the 100-foot-tall lights as well as reduce air quality, energy, greenhouse gas, noise, public service (fire and police), and traffic impacts due to decreased field usage. The track and field would be used by outside groups after school hours and on weekends, similar to existing conditions; however, no nighttime usage would occur under this alternative.

7.5.1 Aesthetics

This alternative would eliminate the installation of the four proposed 100-foot-tall field lights. The overall character of the site would be similar to that of the proposed project but because there would be no nighttime lighting, no light spill and glare impacts on neighboring properties would occur, and the nighttime views from surrounding sensitive receptors would not change. This alternative would primarily update and replace the existing Crescenta Valley HS athletic facilities without adding nighttime use. This alternative would result in an improvement to the overall quality of the Crescenta Valley HS sports field without causing any spill light or glare impacts. This alternative would be environmentally superior compared to the proposed project, as it would avoid the identified significant and unavoidable impact of the proposed project.

7.5.2 Air Quality

Construction of the field improvements under this alternative would be of similar duration to that of the proposed project. Therefore, temporary construction-related emissions of criteria pollutants would be similar to the proposed project. Development of the field improvements without lights would not allow for evening usage, reducing the frequency that users travel to access the field. Emissions from mobile sources would be reduced from those evaluated for the proposed project as a reduction of vehicle miles traveled (VMT) related to this decrease in field usage. Impacts would be less than significant and reduced from the proposed project. However, operational air quality impacts were not identified as significant for the proposed project.

7.5.3 Energy

While construction energy impacts under this alternative would be similar to those of the proposed project, no operational energy resources would be used for field lighting. Under this alternative, operational energy usage would not increase at the project site, and no impact would occur. Therefore, this alternative is considered environmentally superior to the proposed project.

7.5.4 Geology and Soils

Grading and development of the project site would still occur under this alternative, and therefore, impacts to geology and soils would be similar to those that would be generated from the proposed project. The new structures, under this alternative, would still be subjected to risks associated with seismic ground shaking and geologic hazards. Therefore, this alternative would be required to meet the same regulatory requirements as the proposed project. Impacts to geology and soils would be less than significant, which is the same as the proposed project.

7.5.5 Greenhouse Gas Emissions

This alternative would generate a reduced amount of GHG emissions from vehicle trips and would eliminate emissions from lighting system operation (indirectly from purchased electricity use). Construction of the field improvements under this alternative would be of similar duration to that of the proposed project. Therefore, temporary greenhouse gas emissions impacts during construction would be similar to the proposed project. The greatest project-related GHG emission source is from vehicle trips, and electricity used for lighting is also an emission source. VMT related to field usage would not increase compared to the proposed project due to the decrease in available field accessibility on the project site (large events would continue to be hosted offsite as in current conditions). This alternative would have similar but slightly reduced GHG-related impacts as compared to the proposed project and would therefore be considered environmentally superior. However, GHG impacts were not identified as significant for the proposed project.

7.5.6 Hazards and Hazardous Materials

This alternative would result in similar construction impacts, and therefore the same type of hazardous materials typically used for construction and operation of the proposed project would also be used under this alternative. Similarly, the use and storage of hazardous materials would be regulated by the same federal, state, and local laws and permitting requirements as would be done by the proposed project. Therefore, like the proposed project, this alternative would also result in less than significant impacts.

7.5.7 Hydrology and Water Quality

The area of impervious surfaces would be similar compared to the proposed project. Therefore, this alternative would result in similar runoff and potential for impacts to drainage, erosion, and water quality. Like the proposed project, this alternative would introduce new sources of water pollutants from construction and operation activities. Additionally, appropriate BMPs would be implemented to ensure that post-project hydrology and water quality are not degraded compared to the existing conditions. Therefore, this alternative

would result in impacts to hydrology and water quality that are similar to those that would occur from the proposed project. Overall, hydrology and water quality impacts would be less than significant.

7.5.8 Noise

This alternative would result in similar construction noise impacts as the proposed project from permanent bleacher installation and from construction of the restrooms and other supporting facilities. During operation, noise impacts would be significantly reduced as no evening practices, games, or field usage would occur under this alternative. Therefore, this alternative is environmentally superior to the proposed project as it would avoid the identified significant and unavoidable impact of the proposed project.

7.5.9 Public Services

The alternative would reduce the usage of the project site and would not allow the nighttime use of the track and field. Therefore, the needs for public services would be reduce under this alternative compared to the proposed project. This alternative is environmentally superior to the proposed project.

7.5.10 Transportation

Development of the field improvements without lights would not allow for evening usage for larger events. Such events would continue to be hosted offsite as in current conditions. Therefore, this alternative would not result in an increase of VMT. Under this alternative, the absence of field lighting would not allow for nighttime use of the field and would result in a decrease in traffic and parking impacts during nighttime hours as compared to the proposed project. This alternative is environmentally superior to the proposed project because it would avoid the identified significant and unavoidable impact of the proposed project.

7.5.11 Wildfire

This alternative would result in similar construction impacts, and therefore would not require major changes to the existing infrastructure or modification to slopes in a way that would exacerbate fire risk or increase flooding or landslides, and would not exacerbate pollution from wildfires. This alternative would not interfere with emergency responders during an event of emergency or disaster as no evening practices, games or field usage would occur under this alternative. Therefore, this alternative would have similar but slightly reduced wildfire-related impacts as compared to the proposed project and would therefore be considered environmentally superior. However, impacts to wildfire were not identified as significant for the proposed project.

7.5.12 Conclusion

The No Lighting alternative would have reduced environmental impacts in the areas of aesthetics, construction air quality, greenhouse gas emissions, noise, and transportation and traffic. This alternative would be considered environmentally superior to the proposed project. However, the No Lighting alternative does not meet the project objectives of utilizing the existing space to enhance opportunities for after-school athletic and extracurricular activities and providing lighting to allow night use of the sports field.

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:

- Bleacher and Field Improvements with No Lighting Alternative

The No Lighting Alternative has been identified as the environmentally superior alternative. This alternative would reduce impacts associated with energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, public services (fire and police), transportation, and wildfire, and eliminate the significant and unavoidable nighttime lighting, operational noise and and parking impacts. The remaining impacts are generally the same as the proposed project. Elimination of the significant noise and parking impact and elimination of light would warrant this alternative as the superior alternative. However, it would not achieve some of the project objectives and would not meet the project objectives to the degree achieved by the proposed project.

As stated in Section 7.1.2, the main objective of the project is to provide lighting to allow night use of the track and field to accommodate school-related events and activities. The No Lighting Alternative would only allow day usage of the Crescenta Valley HS campus, similar to existing conditions. Therefore, the objective to provide lighting to allow night use of the sports field would not be met. While this alternative would enhance opportunities for after-school athletic and extracurricular activities and provide bleachers with adequate capacity to accommodate various spectator events on the Crescenta Vally HS campus, the opportunities would only be for daytime. "Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts" (CEQA Guidelines § 15126.6[c]).

7. Alternatives to the Proposed Project

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8. Impacts Found Not to Be Significant

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 CEQA Guidelines allow use of an Initial Study to document project effects that are less than significant (Guidelines Section 15063[a]). CEQA 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.

8.1 ASSESSMENT IN THE INITIAL STUDY

The Initial Study that was publicly circulated with the Notice of Preparation (NOP) for the proposed project in February 2020 determined that impacts listed below would be less than significant. Consequently, they have not been further analyzed in this DEIR. Please refer to Appendix A for explanation of the basis of these conclusions. Impact categories and questions below are summarized directly from the CEQA Environmental Checklist, as contained in the Initial Study.

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less than Significant
c) In nonurbanized 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?	Less than Significant
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	

8. Impacts Found Not to Be Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
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
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
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
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
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
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant
IV. 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?	No Impact
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
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
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
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact
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
V. CULTURAL RESOURCES. Would the project:	
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	No Impact
VII. 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.	No Impact
iii) Seismic-related ground failure, including liquefaction?	Less than Significant
iv) Landslides?	No Impact

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
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?	Less than Significant
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
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less than Significant
IX. 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
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
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
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the project:	
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:	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Less than Significant
iv) impede or redirect flood flows?	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than Significant
XI. LAND USE AND PLANNING. Would the project:	
a) Physically divide an established community?	No Impact
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
XII. 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
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
XIII. NOISE. Would the project result in:	
c) 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, would the project expose people residing or working in the project area to excessive noise levels?	No Impact
XIV. POPULATION AND HOUSING. Would the project:	

8. Impacts Found Not to Be Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
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
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact
XV. 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:	
c) Schools?	No Impact
d) Parks?	No Impact
e) Other public facilities?	No Impact
XVI. 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
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
XVII. TRANSPORTATION. Would the project:	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	Less than Significant
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No Impact
XVIII. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	
a) Would the project 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:	
i) 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	Less than Significant
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.	Less than Significant
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:	
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant
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
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

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues		Initial Study Determination
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
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less than Significant
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		
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
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?	No Impact
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

8. Impacts Found Not to Be Significant

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9. Significant Irreversible Changes Due to the Proposed Project

Section 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant irreversible environmental changes that would be caused by implementation of the proposed project. Specifically, the CEQA Guidelines state:

> 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 proposed project would entail the commitment of nonrenewable and/or slowly renewable energy sources such as gasoline, diesel fuel, and electricity; human resources; and natural resources such as lumber and other forest products; sand and gravel; asphalt; steel, copper, lead, other metals; and water. A very minor increased commitment of social services and public maintenance services (e.g., police, fire, sewer, water, solid waste, natural gas, and electricity services) would also be required. Such commitments are currently required for the operation of the existing High School, but would be slightly increased due to the proposed project.

However, given the low likelihood that the project site would revert to a less intense land use requiring less services, energy, or physical resources in the future, implementation of the proposed project would generally commit future generations to the same environmental changes associated with the current school use.

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?

Implementation of the proposed project would not require extension of major infrastructure to places currently unserved by such facilities. The project site is already developed as a track and field on a high school campus, located within a residential neighborhood, served by infrastructure such as water and sewer mains and electricity and natural gas services. The proposed project would not change the underlying land use of the project site and would not change the existing regulations pertaining to land development.

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 serve the existing Crescenta Valley HS campus athletic programs and would not increase total campus enrollment or capacity in the District. The proposed project would not require expansion of facilities and personnel for fire protection or police services to maintain desired levels of service. The proposed project would not result in growth-inducing impacts related to public services.

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

Construction would generate short-term employment. However, considering the size and scale of the proposed project, it would not encourage or facilitate economic effects that could result in other activities that could affect the environment. It is anticipated that construction employment could be absorbed from the regional labor force and would not attract new workers into the county permanently. Operation of the proposed project would not increase total employment at the Crescenta Valley HS campus since it would accommodate the existing school programs, and would not introduce new uses to the project site. The proposed project would not result in growth inducing impacts in this regard.

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 involves the development of bleachers, field lighting and its associated structures. There is no precedent-setting action that could encourage and/or facilitate other activities that could significantly affect the environment. No growth-inducing impact would occur in this regard.

11. Organizations and Persons Consulted

Glendale Unified School District

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Los Angeles County Fire Department

Michael Y. Takeshita, Acting Chief, Forestry Division, Prevention Services Bureau

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