February 2025 | Initial Study/Mitigated Negative Declaration

SKY VIEW ELEMENTARY SCHOOL NEW CLASSROOM BUILDING PROJECT

Perris Elementary School District

Prepared for:

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PLACEWORKS

Table of Contents

Table of Contents

APPENDICES

List of Figures

List of Tables

Abbreviations and Acronyms

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

Abbreviations and Acronyms

CO	carbon monoxide
CO_2e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
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
MCL	maximum contaminant level
MEP	maximum extent practicable
mgd	million gallons per day
MMT	million metric tons

MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O_3	ozone
OES	California Office of Emergency Services
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin
SO_X	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TNM	transportation noise model

Abbreviations and Acronyms

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. Introduction

1.1 OVERVIEW

The Perris Elementary School District (PESD or District) proposes to construct a new two-story classroom building in the southwest corner of the Sky View Elementary School campus (Sky View ES) and expand existing kitchen facilities in the western portion of the Sky View ES campus (proposed project).

In compliance with the California Environmental Quality Act (CEQA), the District, as the lead agency, is preparing the environmental documentation for the proposed project to determine if approval of the requested discretionary actions and subsequent development would have a significant impact on the environment. As defined by Section 15063 of the CEQA Guidelines, an initial study is prepared primarily to provide the lead agency with information to use as the basis for determining whether an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND) would provide the necessary environmental documentation and clearance for the proposed project. This initial study has been prepared to support the adoption of an MND.

1.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The environmental compliance process is governed by the CEQA and the CEQA Guidelines (Public Resources Code [PRC], Section 21000 et seq.; California Code of Regulations [CCR], Title 14, Sections 15000 et seq.). CEQA was enacted in 1970 by the California Legislature to disclose to decision-makers and the public the significant environmental effects of projects and to identify ways to avoid or reduce the environmental effects through feasible alternatives or mitigation measures. Compliance with CEQA applies to California government agencies at all levels: local, regional, and State agencies, boards, commissions, and special districts (such as school districts and water districts). The PESD is the lead agency for the proposed project and is therefore required to conduct an environmental review to analyze the potential environmental effects associated with the proposed project.

PRC Section 21080(a) states that analysis of a project's environmental impact is required for any "discretionary projects proposed to be carried out or approved by public agencies…." In this case, the District has determined that an Initial Study is required to determine whether there is substantial evidence that construction and operation of the proposed project would result in environmental impacts.

1.3 ENVIRONMENTAL PROCESS

A "project" means the whole of an action that 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. An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100 to 65700.
2. An activity undertaken by a person which is supported in whole or in part through public agency contacts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
3. An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies. (CCR § 15378[a])

The proposed discretionary actions by PESD constitute a "project" because the activity would result in a direct physical change in the environment and would be undertaken by a public agency. All "projects" in the State of California are required to undergo an environmental review to determine the environmental impacts associated with implementation of the project.

1.3.1 Initial Study

The purpose of the Initial Study is to 1) provide the lead agency with information to use as the basis for deciding the proper type of CEQA document to prepare; 2) enable the lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration; 3) assist in the preparation of an EIR, if one is required; 4) facilitate environmental assessment early in the design of a project; 5) provide documentation of the factual basis for the findings in an MND or ND; 6) eliminate unnecessary EIRs; and 7) determine if a project is covered under a previously prepared EIR. When an Initial Study identifies the potential for immitigable significant environmental impacts, the lead agency must prepare an EIR (14 CCR § 15064); however, if all impacts are found to be less than significant or can be mitigated to less than significant, the lead agency can prepare an ND, or MND that incorporates mitigation measures into the project (14 CCR § 15070).

1.3.2 Mitigated Negative Declaration

The MND includes information necessary for agencies to meet statutory responsibilities related to the proposed project. State and local agencies will use the MND when considering any permit or other approvals necessary to implement the project. A list of the environmental topics that have been identified for study in the MND is provided in the Initial Study Checklist (Chapter 3).

One of the primary objectives of CEQA is to enhance public participation in the planning process; public involvement is an essential feature of CEQA. Community members are encouraged to participate in the environmental review process, request to be notified, monitor newspapers for formal announcements, and submit substantive comments at every possible opportunity afforded by the City. The environmental review process provides several opportunities for the public to participate through public notice and public review of CEQA documents and at public meetings.

1.4 IMPACT TERMINOLOGY

The following terminology is used to describe the level of significance of impacts.

- A finding of **no impact** is appropriate if the analysis concludes that the project would not affect the particular topic area in any way.
- An impact is considered **less than significant** if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered **less than significant with mitigation incorporated** if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments or other enforceable mitigation measures.
- **Mitigation Measures.** If, after incorporation and implementation of federal, state, and local regulations, there are still significant environmental impacts, then feasible and project-specific mitigation measures are required to reduce impacts to less than significant levels. Mitigation measures must further reduce significant environmental impacts above and beyond compliance with federal, state, and local laws and regulations. Mitigation under CEQA Guidelines Section 15370 includes:
  - Avoiding the impact altogether by not taking a certain action or parts of an action.
  - Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
  - Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
  - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
  - Compensating for the impact by replacing or providing substitute resources or environments.

An impact is considered **potentially significant** if the analysis concludes that it could have a substantial adverse effect on the environment. If any impact is identified as potentially significant, an EIR is required.

1. Introduction

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2. Project Description

2.1 PROJECT LOCATION

The 8.6-acre project site is in the existing Sky View ES campus at 625 Mildred Street in the City of Perris (Assessor's Parcel Number 311-170-009) in Riverside County (project site). The project site is approximately 1.1 miles east of Interstate 215 (I-215) and approximately 2 miles northeast of State Route 74 (SR-74) (see Figure 1, *Regional Location*). Local access to the project site is provided by Mildred Street to the north and Murrieta Road to the east (see Figure 2, *Local Vicinity*).

2.2 EXISTING CONDITIONS

The project site is currently being used as a grass play field in the southwestern corner of the Sky View ES campus. The northern and eastern extent of the project site is currently developed as basketball courts and emergency vehicle access lanes (Figure 3, *Aerial Photograph*). The existing school serves students from transitional kindergarten, kindergarten, and grades 1 through 6. The existing school, which was founded in 2006, currently has one building serving kindergarten students, four modular classroom buildings, an administration building, a library, a detached restroom building, a multi-purpose room building, and a surface parking lot with approximately 74 parking spaces. As shown in Table 1, *Sky View Elementary School 2023-2024 Enrollment*, during the 2023-2024 school year, the elementary school had a student population of approximately 714 students.

Table 1 Sky View Elementary School 2023-2024 Enrollment

School Year Enrollment	Grade TK	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Total
2023-2024	0	96	109	97	124	117	92	79	714

Source: CDE 2024a, 2024b.

The existing elementary school campus comprises approximately 8.6 acres, and the project location would encompass approximately 1.3 acres of the existing play area. Additionally, the project site consists of outdoor hardtop and grass playfields. Access to the project site is provided from Mildred Street and Murrieta Road, including a pick-up/drop-off area in the parking lot, north of the proposed project site.

2.2.1 Surrounding Land Use

The project site is primarily surrounded by vacant parcels in all four directions. There is one property to the east that is zoned as a residential property (R-10,000). To the northwest are Multi-Family Residential properties (MFR-14), and to the northeast is senior housing (R-6,000 SHO). In all, the existing zoning surrounding the project site includes Residential (R-10,000) to the north, west, and east; Multi-Family Residential (MFR-14) to the northwest; medium density residential (R-6,000) to the south; and senior residential (R-6,000 SHO) to the northeast. The project site is also bordered to the south by a storm drain. According to the updated General Plan Land Use Element, Sky View Elementary School is in Planning Area 5, which is described as the Central Core of the city, made up of the primary retail and commercial uses (Perris 2016). General Plan land use designations around the school site are consistent with the existing zoning designations (Perris 2024, 2016).

2.2.2 General Plan and Existing Zoning

Sky View ES is zoned Residential 10,000 (R-10,000), which allows for school and educational uses under a conditional use permit. The General Plan Designation is consistent with this zoning.

2.3 PROPOSED PROJECT DEVELOPMENT

The District proposes to construct a new two-story classroom building with exterior improvements in the southwestern portion of the Sky View ES and expand an existing kitchen located in the western portion of the Sky View ES campus (proposed project), totaling approximately 1.3 acres. The new two-story classroom building (proposed building) would contain 10 new classrooms, an Art classroom and a Science classroom, restrooms, a work room, mechanical and storage rooms, and other utility rooms. The proposed project would not require the demolition of any buildings.

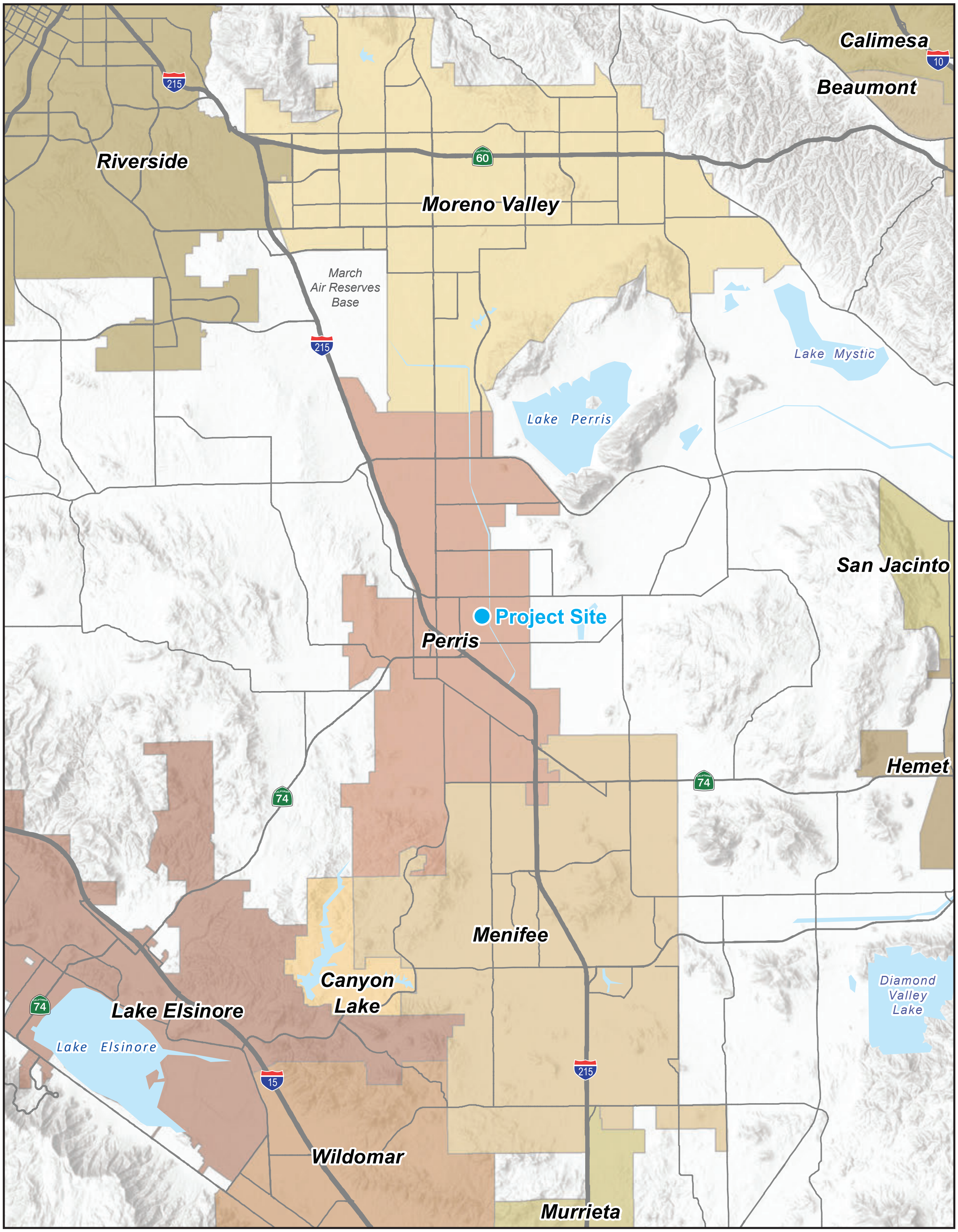
Additionally, the proposed project would include exterior changes and additions such as the relocation of three basketball courts, an outdoor learning space, and two outdoor shade structures with benches within the project site (see Figure 4, *Project Site Plans*). Table 2, *Proposed Project Construction Area*, provides the approximate project construction areas for each aspect of the proposed project.

Table 2 Proposed Project Construction Area

Room	Proposed Facilities	Approximate Area (Square Feet)
10 Classrooms	Total of 10 new 28'x36' classrooms	10,080
2 lab classrooms	Total of two lab classrooms	1,296
Additional Spaces in New Building	Storage, workroom, restrooms, accessory spaces	1,764
Outdoor space	Outdoor learning area, shade structures, repainted hardcourt	43,098
	Total Approximate Project Area	56,238

Source: Schematic design provided by PESD.

Figure 1 - Regional Location



Note: Unincorporated county areas are shown in white.

Source: Generated using ArcMap 2024.

2. Project Description

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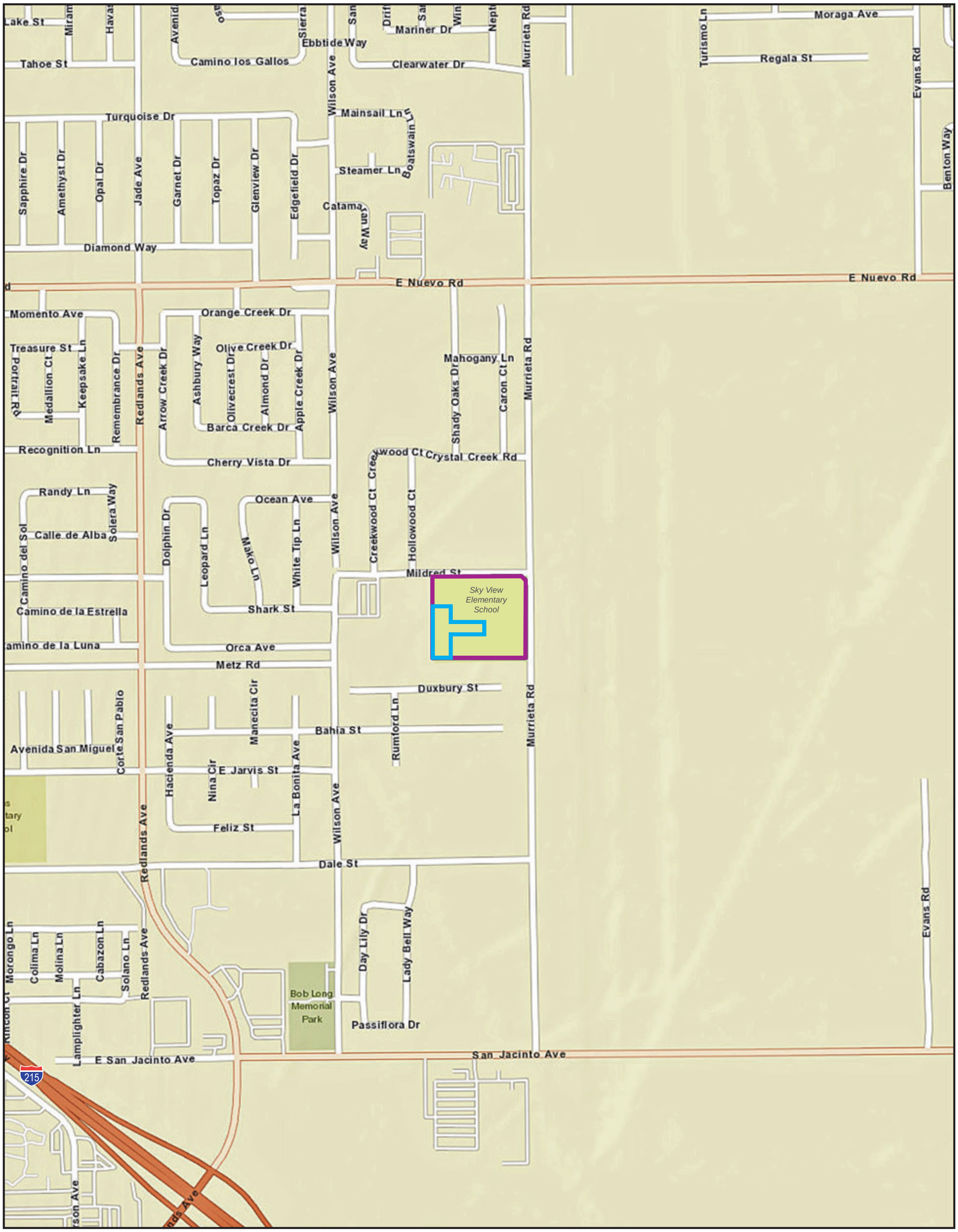
Figure 2 - Local Vicinity



Sb ool Boundary
Projet Boundary

0 1,000
Sa le (Feet)

Source: Generated using ArcMap 2024.

2. Project Description

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Figure 3 - Aerial Photograph

Source: Nearmap 2024.

2. Project Description

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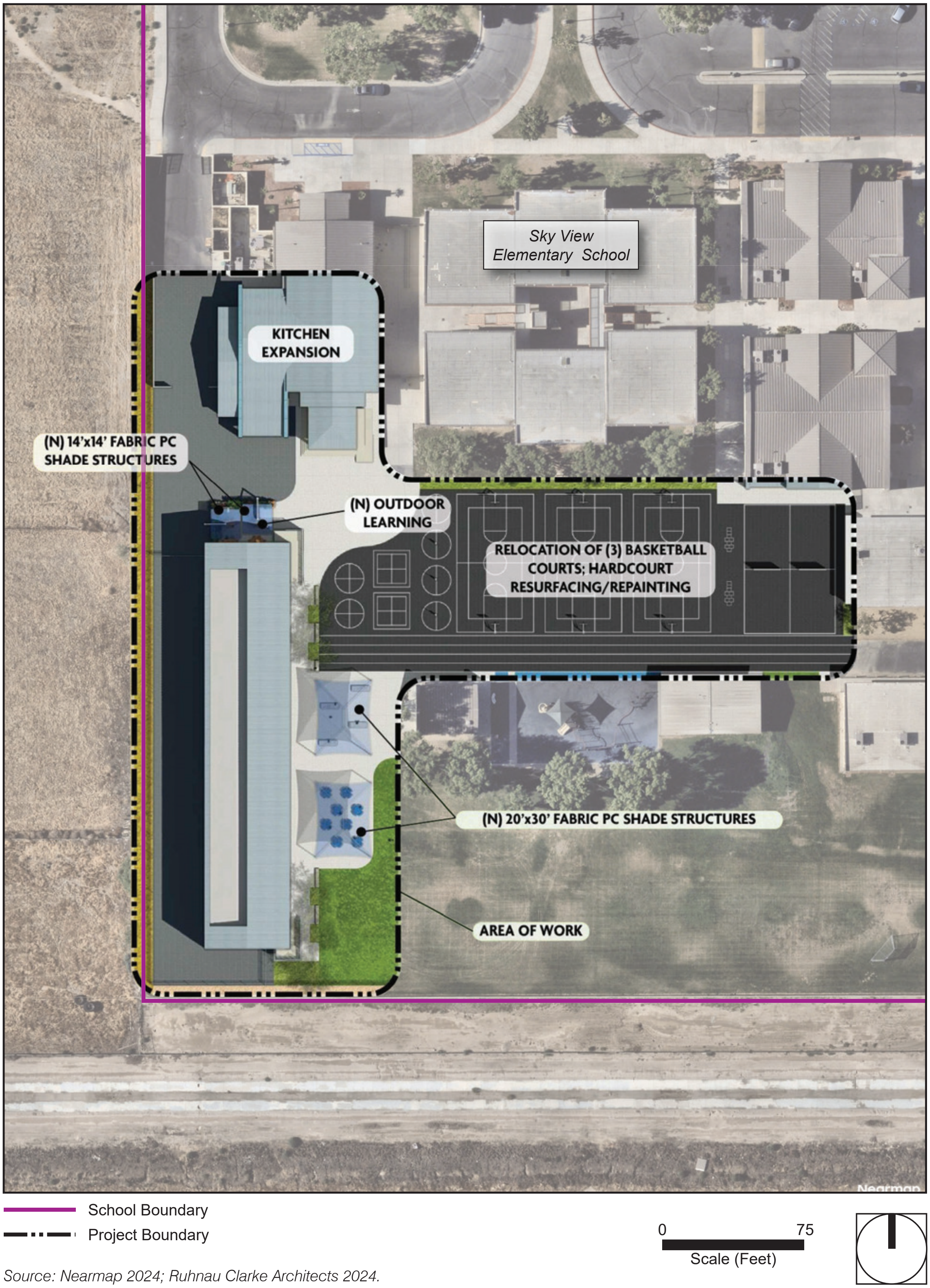
Figure 4 - Project Site Plans



Source: Nearmap 2024; Ruhnau Clarke Architects 2024.

2. Project Description

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2.3.1 Two-Story Classroom Building

The addition of 10 classrooms and Art and Science rooms on the campus would increase the student capacity by a maximum of 324 students, a total increase of approximately 45 percent. Table 3, *Loading Analysis*, provides the student capacity for each classroom and the Art and Science rooms for the proposed two-story classroom building.

Table 3 Loading Analysis

Room Type	Number of Rooms	Classroom Loading	Student Subtotal
Classroom	10	27	270
Labs	2	27	54
		Total Student Loading	324

Source: Information provided by PESD.

A breakdown for each floor of the two-story classroom building in the following paragraphs.

First Floor

The first floor would contain a total of five classrooms with approximately 940 square feet per classroom and would total approximately 8,023 square feet. These five new classrooms would have a total classroom loading of 27 students per classroom. The Art classroom would also be on the first floor, with an approximate square footage of 1,189, allowing for 27 students. The first floor would also include an electrical room, a data room, a resource room, a custodian room, three storage rooms, an elevator and elevator machine room (EMR), a staff restroom, and girl's and boy's restrooms (see Figure 5, *Building Floor Plans*, and Figure 6, *Architectural Renderings*).

Second Floor

The second floor would contain a total of five classrooms with approximately 940 square feet per classroom and would total approximately 10,238 square feet. These five new classrooms would have a total classroom loading of 27 students per classroom. The Science classroom would also be on the second floor, with an approximate square footage of 1,200 and would allow for 27 students. Additional uses on this floor include two unisex student restrooms and a staff restroom, a work room, a custodian room, an elevator, a storage room, a data room and an additional storage room, and a preparation room adjoining the Science classroom. Access to the second floor will be provided by two staircases at the northern and southern ends of the proposed new classroom building and an elevator (see Figure 5).

2.3.2 Kitchen Facilities Expansion

The proposed project would also include the expansion of kitchen facilities. The additional kitchen facilities would be on the perimeter of the existing kitchen area and would include the construction of a serving area, a walk-in freezer, a walk-in cooler, lockers and entry way, and restrooms. The expansion would be approximately 967 square feet.

2.3.3 Exterior Improvements

Outdoor Learning Area

An outdoor learning area would be constructed north of the proposed two-story classroom building. The area would be hardscaped and would include landscaping and two shade structures.

Outdoor Shade Structures

Outdoor shade structures would be installed east of the proposed two-story classroom building. The shaded areas would include benches for seating and picnic tables.

Hardcourt Improvements and Repainting

The existing hardcourt play areas would be resurfaced and repainted. The three existing basketball courts would be moved east of their current location to make room for the two-story classroom building. Other play areas would be painted and replace the existing basketball courts. Additionally, a portion of the grass area, located within the project site, would be replaced with a hardscape east of the two-story classroom building and extending around the existing restroom building. Additionally, new hardtop would be located along the northern end of the proposed building, extending to meet south of the multipurpose room building.

Landscaping

The project site would also include landscaping. This would consist of planting trees and a raised garden bed adjacent to the outdoor learning area.

2.3.4 Site Access, Circulation, and Parking

2.3.4.1 VEHICULAR ACCESS AND CIRCULATION

As shown on Figure 3, vehicular access to the project site is currently provided via Mildred Street. The parking lot and pick-up areas are one-way lanes which have an outlet onto Murrieta Road. The proposed project would not disturb the current vehicular access and circulation of the school parking lot. Additionally, the proposed project would maintain the existing fire lane.

2.3.4.2 PEDESTRIAN ACCESS AND CIRCULATION

As shown on Figure 3, pedestrian access to the project site is currently provided via a public sidewalk along Mildred Street and Murrieta Road. The campus also includes internal walkways for foot access. The proposed project would not disturb the current pedestrian access and circulation at the school.

Figure 5 - Building Floor Plans

Source: Ruhnau Clarke Architects 2024.

2. Project Description

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Figure 6 - Architectural Renderings

Source: Ruhnau Clarke Architects 2024.

2. Project Description

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2.4 PROJECT CONSTRUCTION AND PHASING

Project construction would occur over approximately 14 months, currently anticipated to begin in May 2025 and end in July 2026. Construction would include the following activities: grading and excavation, trenching for site utilities and irrigation, building construction, architectural coatings, driveway and walkway construction, and landscaping improvements. The construction schedule developed for the proposed project is considered conservative (i.e., it represents a "worst case" scenario).

During construction, vehicles, equipment, and materials would be staged and stored on the project site. No long-term staging of equipment would occur around the perimeter of the project site parcels, and no construction staging would occur in the public right-of-way. The construction site and staging areas would be clearly marked, and construction fencing would be installed to prevent disturbance and safety hazards. A combination of on- and off-site parking facilities for construction workers would be identified during construction.

2.5 AGENCY ACTION REQUESTED

It is anticipated that the reviewing agencies for the proposed project would include, but may not be limited to:

City of Perris, Fire Department. Approval of plans for emergency access and emergency evacuation. Division of State Architect's approval of the fire/life safety portion of a project requires local fire authority review of elevator/stair access for emergency rescue and patient transport; access roads, fire lane markings, pavers, and gate entrances; fire hydrant location and distribution; and fire flow (location of post indicator valve, fire department connection, and detector check valve assembly.

California Department of General Services, Division of State Architect (DSA). Plan review and construction oversight, including structural safety, fire and life safety, and access compliance.

2. Project Description

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3. Environmental Checklist

3.1 PROJECT INFORMATION

1. Project Title: Sky View Elementary School New Classroom Building Project

2. Lead Agency Name and Address:
Perris Elementary School District
143 East 1st Street
Perris, CA 92570

3. Contact Person and Phone Number:
Bradd E. Runge
Director of Facilities, Maintenance, and Operations
(951) 657-3118

4. Project Location: The Sky View Elementary School Campus (campus) is located at 625 Mildred Street (Assessor Parcel Number 311-170-009) in the City of Perris, in Riverside County.

5. Project Sponsor's Name and Address:
Perris Elementary School District
143 East 1st Street
Perris, CA 92570

6. General Plan Designation: Residential 10,000 (R-10,000).

7. Zoning: Residential 10,000 (R-10,000).

8. Description of Project: The Perris Elementary School District proposes to construct a new two-story classroom building at the southwest corner of the Sky View Elementary School Campus that would contain 10 new classrooms and two labs, restrooms, a work room, and mechanical and storage rooms. Additionally, the proposed project would expand the existing kitchen in the western portion of the campus. The proposed project would increase student capacity by approximately 45 percent compared to the existing conditions. Additionally, the proposed project would include exterior changes and additions such as the relocation of three basketball courts, an outdoor learning space, and two outdoor shade structures with benches within the project site.

9. Surrounding Land Uses and Setting: The project site is primarily surrounded by vacant parcels in all four directions. There is one property to the east that is zoned as a residential property (R-10,000). To the northwest are Multi-Family Residential properties (MFR-14). and to the northeast is senior housing (R-6,000 SHO). In all, the existing zoning surrounding the project site includes Residential (R-10,000) to the north, west, and east; Multi-Family Residential (MFR-14) to the northwest; medium density residential (R-6,000) to the south; and senior residential (R-6,000 SHO) to the northeast. The project site is also

3. Environmental Checklist

bordered to the south by a storm drain. According to the updated General Plan Land Use Element, Sky View Elementary School is in Planning Area 5, which is described as the Central Core of the City of Perris, made up of the primary retail and commercial uses in the city. General Plan land use designations around the school site are consistent with the existing zoning designations.

10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.94 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

The District invited California Native American tribes that are traditionally and culturally affiliated with the project area to consult on the proposed project via email. 13 tribes were contacted, consistent with Assembly Bill 52. The 13 tribes contacted were Agua Caliente Band of Cahuilla Indians, Augustine Band of Cahuilla Indians, Cabazon Band of Cahuilla Indians, Morongo Band of Mission Indians, Pala Band of Mission Indians, Pechanga Band of Indians, Quechan Tribe of the Fort Yuma Reservation, Ramona Band of Cahuilla, Rincon Band of Luiseno Indians, Santa Rosa Band of Cahuilla Indians, Soboba Band of Luiseno Indians and Torres-Martinez Desert Cahuilla Indians. The letters were sent on December 24, 2024. Additionally, the NAHC Sacred Lands File search came back positive for the Pechanga Band of Indians. Six tribes have contacted the District. The District provided additional project information to the Agua Caliente Band of Cahuilla Indians, Pechanga Band of Indians, and the Rincon Band of Luiseno Indians. The District met with representatives of the Rincon Band of Luiseno Indians on January 28, 2025. The tribe requested additional information for the proposed project.

The Augustine Band of Cahuilla Indians, Quechan Tribe of the Fort Yuma Reservation, and Santa Rosa Band of Cahuilla Indians did not wish to consult on the project and/or deferred any comments to tribes that are familiar with the project area. No additional project information was requested by any other tribes.

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture / Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

3.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

[signature]	2/14/25
Signature	*Date*
Bradd E. Runge	Director of Facilities, Maintenance, and Operations

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) **Earlier Analyses Used.** Identify and state where they are available for review.

   b) I**mpacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) **Mitigation Measures.** For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

3. Environmental Checklist

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4. Environmental Analysis

This section provides checklists for environmental impacts, an evaluation of the impact questions in the checklists, and mitigation measures to reduce impacts if necessary.

4.1 AESTHETICS

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
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?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. Scenic vistas are panoramic views of features such as mountains, forests, the ocean, or urban skylines. Because the majority of developable land within the City of Perris is located on a flat, broad basin, virtually all future building construction consistent with land use and development standards in General Plan will obstruct views to the foothills from at least some vantage points. However, the east-west and north-south oriented roadway network and the streetscapes of Perris frame and preserve scenic vistas from public rights-of-way to the distant horizons and foothills (City of Perris 2005). Owing to the flatness of the basin, the view corridors extend for miles along current and planned roadways, preserving scenic vistas from the broad basin to the surrounding foothills.

Additionally, the campus and surrounding area lack significant topography and are developed with urban land uses. The campus is fully developed with an existing elementary school campus, playgrounds, on-site parking, and ancillary educational uses, and the proposed project would be developed within the existing land uses. There are no protected or designated scenic vistas or views in the proposed project vicinity, and the proposed project would not obscure any scenic vistas. Implementation of the proposed project would not result in the

4. Environmental Analysis

obstruction or degradation of existing scenic views. Therefore, the proposed project's impacts on scenic vistas are less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. Large rocks scattered among the undeveloped, rolling topography in the west-central area of Perris are an obvious presence in the visual landscape in this area. However, no particular rock or collection of rocks in this landscape is notable by virtue of unique formation, size, or character. The Planning Commission encourages the preservation of rocks by requesting applicant to submit rock preservation maps with their submittals. No notable stands of native or mature trees exist in the city, and no impact is associated with development consistent with the General Plan. All work would be completed within the project site, which is fully developed as an elementary school.

Additionally, there are no designated state scenic highways located near the campus. The nearest eligible designated state scenic highway is Route 74, located 1.4 miles southwest of the campus (Caltrans 2023). The proposed project would not be visible from a scenic highway and would not result in changes to existing uses, and construction would remain within the campus. Therefore, the proposed project would not damage scenic resources within a state scenic highway. Impacts on significant scenic resources would be 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 Impact. The project site consists of a fully developed elementary school campus. The proposed project would construct a two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen. The project site is primarily surrounded by vacant parcels zoned for residential uses. The proposed project would be consistent with the development on campus and would not conflict with the zoning or regulations governing scenic quality. The addition of the new classroom building and expansion of kitchen facilities would be consistent with the existing building character. Therefore, the proposed project would not degrade the visual character and quality of public views on the campus and its surroundings. Impacts would be less than significant.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The two major causes of light pollution on the campus are spill light and glare from existing sources of light. Spill light is caused by misdirected light that illuminates areas outside the area intended to be lit. Glare occurs when a bright object is against (or reflects off) a dark background or shiny surface. Existing sources of light on the campus include light emanating from building interiors, building and security lights, and parking lot lights. The campus is located within an undeveloped area zoned for residential uses. Implementation of the proposed project would result in the development of a two-story building with associated lighting. However, the proposed project would not exacerbate light and glare compared to existing conditions that would result in adverse impacts to daytime and nighttime views because the proposed project would be consistent with the development on the Sky View ES campus. Additionally, the proposed project would be subject to the City's Zoning Code which provides regulations for lighting. Section 19.02.110, Lighting, states that all lighting, including security lighting, shall be directed away from adjoining properties and the public right-of-way. Therefore, impacts would be less than significant.

4.2 AGRICULTURE AND FORESTRY RESOURCES

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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:				
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The proposed project would be developed on an existing elementary school campus. The proposed project site is identified as Urban Built-Up Land and is not identified as or located adjacent to an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2024). The proposed project is adjacent to parcels zoned for residential to the west and is adjacent to areas designated as Farmland of Local Importance directly north and east. These farmlands are not covered by the above categories but are of locally significant economic importance. The area south of the project site is characterized as Other

Land. The proposed project would not physically impact nor alter the use of agricultural fields because project activities would be located on a developed school campus. Therefore, no impacts would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. Williamson Act contracts restrict the use of privately owned land to agriculture and compatible open space uses under contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value. The proposed project is on Urban and Built-Up Land and not zoned for agricultural use (DOC 2024). The proposed project is not subject to a Williamson Act contract, and the existing zoning is Residential 10,000 (R-10,000) (City of Perris 2024). Therefore, no impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The proposed project's development would not conflict with existing zoning for forest land, timberland, or timberland production. Forest land is defined as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (PRC section 12220(g)). Timberland is defined as "land….which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees" (PRC section 4526). The project site is zoned R-10,000, for the use and development of detached single-family residential development at a density of 2 to 4 dwellings per net acre and is not zoned for forest land or timberland use (City of Perris 2024a). Therefore, no impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed project would include the construction of a two-story classroom building with exterior improvements and the construction of an expansion of kitchen facilities to an existing kitchen within an existing elementary school campus. Additionally, no significant forest land uses are present on-site nor in the immediate vicinity. No vegetation on-site is cultivated for forest resources, and any existing vegetation is limited to ornamental trees and shrubs. Construction of the proposed project would not require any changes to the existing environment that could result in the loss or conversion of forest land to non-forest use. Therefore, no impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The project site is developed as an elementary school campus, and no significant agricultural uses or forest land uses are present on-site nor in the immediate vicinity. Development of the proposed project would not result in the conversion of farmland to nonagricultural or forest land to non-forest use. Therefore, no impact would occur.

4.3 AIR QUALITY

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) 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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?		X		
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

The analysis in this section is based in part on the following studies, which are in Appendix A and Appendix B, respectively, of this Initial Study.

- *Air Quality and Greenhouse Gas Emissions Data, PlaceWorks,* December 2024
- *Construction Health Risk Assessment, PlaceWorks,* December 2024

The Air Quality section addresses the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthy pollutant concentrations. A background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the project site, and air quality modeling can be found in Appendix A.

The primary air pollutants of concern for which ambient air quality standards (AAQS) have been established are ozone (O_3), carbon monoxide (CO), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead (Pb). Areas are classified under the federal and California Clean Air Act as either in attainment or nonattainment for each criteria pollutant based on whether the AAQS have been achieved. The South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (South Coast AQMD), is designated nonattainment for O_3, and $PM_{2.5}$ under the California and National AAQS, nonattainment for PM_{10} under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS (CARB 2024).

Furthermore, the South Coast AQMD has identified regional thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Development projects below the regional significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Where available, the significance criteria established by the South Coast AQMD may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The South Coast AQMD adopted the 2022 Air Quality Management Plan (AQMP) on December 2, 2022. Regional growth projections are used by South Coast AQMD to forecast future emission levels in the SoCAB (South Coast AQMD 2022). For southern California, these regional growth projections are provided by the Southern California Association of Governments (SCAG) and are partially based on land use designations included in city/county general plans. Typically, only large, regionally significant projects have the potential to affect regional growth projections. In addition, the consistency analysis is generally only required in connection with the adoption of General Plans, specific plans, and significant projects.

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. These demographic trends are incorporated into SCAG's 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to determine priority transportation projects and vehicle miles traveled in the SCAG region. The proposed project would involve construction of a new two-story school building and addition to an existing building, which would add approximately 324 students to the overall student capacity. Overall, the additional student capacity would be to accommodate and serve the existing community and would not induce population growth. Additionally, as demonstrated below in Section 3.3(b), the regional emissions that would be generated by the operational phase of the proposed project would be less than the South Coast AQMD significance thresholds and would therefore not be considered by South Coast AQMD to be a substantial source of air pollutant emissions that would have the potential to affect the attainment designations in the SoCAB. Therefore, the proposed project would not affect the regional emissions inventory or conflict with strategies in the AQMP and no impacts would occur.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. The following describes project-related impacts from regional short-term construction activities and regional long-term operation of the proposed project.

Regional Short-Term Construction Impacts

Construction activities would generate air pollutants. These emissions would primarily be 1) exhaust from off-road diesel-powered construction equipment; 2) dust generated by construction activities; 3) exhaust from on-road vehicles; and 4) off-gassing of volatile organic compounds (VOCs) from paints and asphalt.

Construction activities associated with the proposed project would involve asphalt demolition, site preparation, grading, building construction, paving, and architectural coating. Construction would occur from May 2025 to July 2026. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1, and are based on the preliminary construction information provided or confirmed by the District and on CalEEMod default inputs. Project-related construction emissions are shown in Table 4, *Maximum Daily Regional Construction Emissions*. As shown, the maximum daily emissions for VOC, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ from project-related construction activities would be less than their respective

4. Environmental Analysis

South Coast AQMD regional significance threshold values. Therefore, regional air quality impacts from project-related construction activities would be less than significant and no mitigation measures are necessary.

Table 4 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lb./day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Asphalt Demolition	2	15	16	<1	3	1
Site Preparation	1	11	12	<1	2	1
Rough Grading	2	15	16	<1	5	2
Building Construction – Year 2025	1	11	13	<1	1	<1
Building Construction – Year 2026	1	10	12	<1	1	<1
Asphalt Paving	1	6	9	<1	<1	<1
Architectural Coating	16	1	1	<1	<1	<1
Maximum Daily Emissions	16	15	16	<1	5	2
South Coast AQMD Regional Construction Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2022.1.

1 Based on the preliminary information provided and/or confirmed 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, such as watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour (25 miles per hour as modeled) on unpaved surfaces, and street sweeping with Rule 1186–compliant sweepers.

Long-Term Operation-Related Air Quality Impact

Typical long-term air pollutant emissions that would be generated by operation of the proposed project would be from area sources (e.g., landscaping equipment, aerosols, and architectural coatings), energy use (i.e., natural gas), and mobile sources (i.e., on-road vehicle trips associated with the additional students). The proposed project is projected to generate up to 740 average daily passenger vehicle trips (see Appendix D).

Table 5, *Comparison of Project Emissions to Regional Daily Thresholds*, shows the maximum daily regional operation-related criteria air pollutants that would be generated by the project. As shown in Table 5, the proposed project would not generate operation-related emissions that would exceed the South Coast AQMD regional significance thresholds. Therefore, impacts to regional air quality from operation of the proposed project would be less than significant and no mitigation measures are necessary.

Table 5 Comparison of Project Emissions to Regional Daily Thresholds

Source	Criteria Air Pollutants (lbs./day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile	3	3	22	<1	5	1
Area	1	<1	1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Total	4	3	23	<1	5	1
South Coast AQMD Regional Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	n/a

Source: CalEEMod Version 2022.1.
Notes: “<1” = a value less than 1

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact With Mitigation Incorporated. The proposed project could expose sensitive receptors to elevated pollutant concentrations if it causes or significantly contributes to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction Phase

Criteria Air Pollutants

Localized significance thresholds (LSTs) are based on the California AAQS, which are the most stringent AAQS to provide a margin of safety in the protection of public health and welfare. They are designated 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 people engaged in strenuous work or exercise. The screening-level construction LSTs are based on the size of the daily acreage disturbed, distance to the nearest sensitive receptor, and Source Receptor Area (SRA). The nearest offsite sensitive receptors to the project site are the single-family residences to the north, northwest, west, and southwest and the students of Sky View ES.

Air pollutant emissions generated by construction activities would cause temporary increases in air pollutant concentrations. Table 6, *Localized Construction Emissions,* shows the maximum daily construction emissions (pounds per day) generated during onsite construction activities compared with the South Coast AQMD screening-level LSTs. For purposes of this analysis, the screening-level LSTs are based on sensitive receptors within the minimum reference distance of 82 feet (25 meters) of the project site. As shown in the table, the project construction-related onsite emissions would not exceed the screening-level LSTs. Therefore, localized air quality impacts associated with criteria air pollutants generated from project-related construction activities would be less than significant, and no mitigation measures are necessary.

4. Environmental Analysis

Table 6 Localized Construction Emissions

Construction Activity	Pollutants(lbs./day)[1]			
	NO_X	CO	PM_{10}[2]	$PM_{2.5}$[2]
Building Construction – Year 2025	11	12	<1	<1
Building Construction – Year 2026	10	12	<1	<1
Asphalt Paving	6	8	<1	<1
Architectural Coating	1	1	<1	<1
South Coast AQMD 1 Acre or Less Screening-Level LST[3]	118	602	4	3
Exceeds LST?	No	No	No	No
Rough Grading	14	15	4	2
South Coast AQMD 1.88-Acre Screening-Level LST[3]	163	848	7	4
Exceeds LST?	No	No	No	No
Asphalt Demolition	14	15	3	1
Site Preparation	11	11	2	1
South Coast AQMD 2-Acre Screening-Level LST[3]	170	883	7	4
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2022.1; South Coast AQMD 2008 and 2011.
Notes: "<1" = a value less than 1; In accordance with South Coast AQMD methodology, only onsite stationary sources and mobile equipment are included in the analysis.
1 Based on the preliminary information provided and/or confirmed 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, such as watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour (25 miles per hour as modeled) on unpaved surfaces, and street sweeping with Rule 1186–compliant sweepers.
3 Screening level LSTs are based on receptors within the minimum reference distance of 82 feet (25 meters) in SRA 24 – Perris Valley.

Toxic Air Contaminants (Health Risks)

The proposed project would elevate concentrations of toxic air contaminants (TACs) in the vicinity of sensitive land uses during construction activities. The nearest sensitive receptors to the project site are Sky View ES students and the offsite single-family residences to the north across Mildred Street. Consequently, a site-specific construction health risk assessment (HRA) of toxic air contaminants was prepared (see Appendix B).

The United States Environmental Protection Agency's (EPA) AERMOD, Version 12.0.0, dispersion modeling program was used to estimate excess lifetime cancer risk and chronic noncancer hazard index for noncarcinogenic risk annual concentrations at the nearest sensitive receptors. The results of the analysis are shown in Table 7, *Construction Risk Summary*. The results of the HRA are based on the maximum receptor concentration over an approximately 14-month construction exposure duration for off-site residential receptors and student receptors at Sky View ES. Risk is based on the updated Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual (OEHHA 2015).

Table 7 Construction Risk Summary

Receptor	Cancer Risk (per million)	Chronic Hazards
Maximum Exposed Receptor – Off-Site Resident	3.3	0.01
Maximum Exposed Receptor – Sky View ES Student (Outdoors)	10.3	0.24
Maximum Exposed Receptor – Sky View ES Student (Indoors)	5.4	0.13
South Coast AQMD Threshold	10	1.0
Exceeds Threshold?	Yes	No

See Appendix B.
Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

As shown in the table, cancer risk for the maximum exposed individual off-site resident from construction activities related to the proposed project was calculated to be 3.3 in a million, which would not exceed the 10 in a million significance threshold. Using the latest 2015 OEHHA Guidance Manual, the calculated total cancer risk conservatively assumes that the risk for the maximum exposed receptor consists of a pregnant woman in the third trimester that subsequently gives birth to an infant during the approximately 14-month construction period; therefore, all calculated risk values were multiplied by a factor of 10. In addition, it was conservatively assumed that the residents were outdoors 8 hours a day, 260 construction days per year, and exposed to all of the daily construction emissions.

Cancer risk for the maximum exposed individual student at Sky View ES for construction activities related to the proposed project was calculated to be 10.3 in a million, which would exceed the 10 in a million significance threshold. This cancer risk level of 10.3 in a million is conservatively based on a student receptor outdoors for 8 hours a day, 180 construction days per year, and exposed to all of the daily construction emissions. In general, students would be indoors for most of the school day and would not be situated in the area with the highest concentrations, which would be the northwestern portion of the existing grass playfield. For comparison, the cancer risk for a student in the building that is within the highest pollution concentration area (existing westernmost building) would be 5.4 in a million. For noncarcinogenic effects, the chronic hazard index identified for each toxicological endpoint totaled less than one for all the off-site residential and onsite student receptors. Therefore, chronic noncarcinogenic hazards are within acceptable limits.

Overall, as discussed and shown Table 7, project-related construction activities would generate health risk levels that exceed the South Coast AQMD health risk significance thresholds for outdoor student receptors without mitigation. However, as shown in Table 8, *Construction Risk Summary, Mitigated*, with incorporation of Mitigation Measure AQ-1, which would require diesel-powered off-road construction equipment greater than 50 horsepower (HP) used during demolition, site preparation, and grading activities to have engines that meet Tier 4 Interim emissions standards, cancer risk levels for outdoor students would be reduced to below the cancer risk significance threshold of 10 in a million. Therefore, the proposed project would not expose sensitive receptors to substantial concentrations of TAC emissions during construction, and project-related construction health risk impacts would be less than significant with incorporation of mitigation.

4. Environmental Analysis

Table 8 Construction Risk Summary, Mitigated

Receptor	Cancer Risk (per million)[1]	Chronic Hazards[1]
Maximum Exposed Receptor – Off-Site Resident	2.8	0.01
Maximum Exposed Receptor – Sky View ES Student (Outdoors)	8.8	0.21
Maximum Exposed Receptor – Sky View ES Student (Indoors)	4.6	0.11
South Coast AQMD Threshold	10	1.0
Exceeds Threshold?	No	No

See Appendix B.
Note: Cancer risk calculated using 2015 OEHHA HRA guidance.
[1] Includes incorporation of Mitigation Measure AQ-1, which requires that all diesel-powered off-road construction equipment greater than 50 HP used for demolition, site preparation, and grading activities meet the Tier 4 Interim emissions standards.

Operation Phase

Criteria Pollutants (LSTs)

Land uses that have the potential to generate substantial stationary sources of emissions include industrial land uses, such as chemical processing and warehousing operations where truck idling would occur on-site, which require a permit from South Coast AQMD. The proposed project involves developing a new two-story classroom building in addition to other school campus improvements. Thus, it would not fall within the types of land uses that have the potential to generate substantial emissions from on-site stationary sources. While operation of the new building would use standard on-site mechanical equipment such as heating, ventilation, and air conditioning equipment, air pollutant emissions would be nominal. Therefore, localized air quality impacts related to operation-related criteria air pollutant emissions would be less than significant and no mitigation measures are required.

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 parts per million (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 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.

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.[1] As identified in South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide

[1] 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 (South Coast AQMD 2003).

(1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2023).

The proposed project would result in 740 average daily trips (ADT) and up to approximately 112 and 79 peak hour trips in the AM and PM peak hours, respectively. Overall, for the roadway segments within the project traffic study area, existing average daily traffic volumes plus project vehicle trips would range between 5,400 to 5,750 ADTs for Murrieta Road, between 2,560 to 3,040 ADTs for Mildred Street, and 2,560 ADTs for Wilson Avenue (see Appendix D). In consideration of these relatively low overall daily volumes, in which hourly volumes would be even less, it is not anticipated that the project would result in peak hour intersection volumes that would exceed the CO hotspot screening criteria. Thus, the proposed project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project site. Therefore, localized air quality impacts related to mobile-source emissions as they pertain to CO hotspots would be less than significant and no mitigation measures are required.

Mitigation Measures

AQ-1 The Perris Elementary School District (District) shall specify in the construction bid that the project construction contractor(s) and subcontractor(s) comply with the following requirements for all diesel-powered off-road equipment greater than 50 horsepower:

- Have engines that meet the United States Environmental Protection Agency Tier 4 Interim emission standards unless it can be demonstrated to the District that such equipment is not commercially available. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier 4 Interim engines similar to the availability for other large-scale construction projects in the region at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction and (ii) geographic proximity to the project site of Tier 4 Interim equipment. Where such equipment is not commercially available, as demonstrated by the construction contractor, Tier 3 equipment retrofitted with a California Air Resources Board's Level 3 Verified Diesel Emissions Control Strategy (VDECS) shall be used.
- Maintain a list of all operating equipment in use on the project site for verification by the District official or his/her designee. The construction equipment list shall state the makes, models, Engine Family Number, Equipment Identification Number, and number of construction equipment on-site.
- Ensure that all equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.
- Ensure that all construction plans submitted to the District clearly show the selected emission reduction strategy for construction equipment over 50 horsepower.

4. Environmental Analysis

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The proposed project would not result in objectionable odors. The threshold for odor is if a project creates an odor nuisance pursuant to South Coast AQMD Rule 402, Nuisance, which states:

> A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The proposed project involves construction of a new elementary school building, building addition, and some school campus improvements and would not fall within the objectionable odors land use types. During project-related construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. However, any construction-related odor emissions would be temporary, low in concentration, and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor, they would be diluted to well below any level of air quality concern. Thus, construction-related odors would not affect a substantial number of people. Therefore, overall, potential odor impacts from operation- and construction-related activities of the proposed project would be less than significant and no mitigation measures are required.

4.4 BIOLOGICAL RESOURCES

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			X	
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?				X
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?				X
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?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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?			X	

Would the project:

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

Less Than Significant Impact. Sensitive biological resources are habitats or species that have been recognized by federal, state, and/or local agencies as endangered, threatened, rare, or in decline throughout all or part of their historical distribution. Twenty-three special status plant species were determined to have some potential to occur within the city, although no special status species were observed in the City during the reconnaissance-level surveys; and thirty-one special status wildlife species have been recorded to occur within seven miles of the city (City of Perris 2005). However, the project site and surrounding area is developed and zoned for residential use and consists of an active existing elementary school and surrounding urban developed uses. Vegetation at the campus consists of ornamental trees and plants. No sensitive tree species would be removed in the implementation of the proposed project. There is no native habitat and no suitable habitat for threatened, endangered, or rare species on or near the site. The likelihood of species dispersal, whether plants or wildlife, from surrounding areas to the campus is very low. Therefore, less than significant impact would occur on special-status species.

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. The U.S. Fish and Wildlife Service manages the National Wetlands Inventory, a digital Wetlands Mapper with vetted data to represent current information on wetlands, riparian, and deep-water habitats. The Riversidean and Sage Scrub and Southern Willow Scrub plant communities in the City of Perris are considered sensitive habitats by the California Department of Fish and Wildlife because these are home to plant and wildlife species that are either threatened or endangered. The northern portion of the Perris Valley Channel contains freshwater marsh. The San Jacinto River channel includes the Southern Willow Scrub plant community that is habitat for various threatened or endangered plant and wildlife species. Disturbed Riparian Scrub plant communities are found in both the Perris Valley Channel and the San Jacinto River Channel. However, these habitats are not present in or near the project site, nor does the project site contain any other sensitive natural communities identified in local, regional, state, or federal plans, policies, or regulations (USFWS 2024). Therefore, no impact would occur, and no further analysis is required.

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. Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as swamps, marshes, and bogs. According to the National Wetlands Inventory, there are no wetlands near or within the project site (USFWS 2024). The project site is entirely developed and does not contain any waterways or undeveloped land capable of supporting federally protected wetlands. Therefore, no wetlands would be impacted by the development activities that would occur on-site as a part of the proposed project. No impact would occur, and no further analysis is required.

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?

Less than Significant Impact. Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas, such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. The San Jacinto River provides opportunities for wildlife movement in a north-south and east-west direction, providing connectivity between large and regionally important habitat within the San Jacinto and Santa Ana Mountains (RCA 2024). The proposed project is approximately nine miles from the San Jacinto River. The project site is fully developed with an existing elementary school and is not suitable to function as a corridor for migratory wildlife, nor is it located in near proximity to the existing wildlife corridor in the city. Therefore, a less than significant impact is expected.

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

No Impact. The proposed project would comply with the City of Perris tree protection ordinance (Perris Municipal Code, Chapter 19.71, Urban Forestry Establishment and Care, § 19.71.050, Tree Protection), which requires that trees on public and private property be protected during land development activities, permits be obtained to remove or significantly alter trees, developers submit a Tree Protection Plan to safeguard existing trees during construction, and mitigation measures be provided if tree removal is unavoidable (City of Perris 2024b). No trees in public or private property, including adjacent sidewalks or street trees, would be removed or damaged as a result of implementation of the proposed project. The proposed project would not conflict with local polices or ordinances protecting biological resources. Therefore, no impact would occur, and no further analysis is required.

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?

Less Than Significant Impact. The proposed project is in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (CDFW 2024). This plan protects 146 animal and plant species, including 34 that are threatened or endangered, and is one of the largest habitat conservation plans in the United States. The MSHCP includes 38 specially designed habitat linkages that allow animals to safely move from one preserve area to another (RCA 2024). Additionally, any project within the Criteria Area covered by the MSHCP must obtain approval from the Regional Conservation Authority (RCA) and a permit for the project from the local agency responsible. The project is subject to applicable MSHCP conditions and fees prior to issuance of any permits (RCA 2024).

The project applicant shall submit the Joint Project Review (JPR) Application and initial deposit to RCA for approval and payment of all applicable fees (RCA 2024).

With implementation of the identified standard permit condition above, the project would not conflict with the provisions of the MSHCP, and impacts would be less than significant.

4. Environmental Analysis

4.5 CULTURAL RESOURCES

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	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?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?			X	

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

No Impact. Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally a resource is considered "historically significant" if it meets one of the following criteria:

i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

ii) Is associated with the lives of persons important in our past;

iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values;

iv) Has yielded, or may be likely to yield, information important in prehistory or history.

The proposed project would result in the construction of a new two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen. Uses are similar to existing conditions. The existing Sky View Elementary School was completed and first opened on August 14, 2006 (CDE 2024). The campus is not listed as an eligible in the National Register of Historic Places (National Parks Service 2023). Additional, Sky View ES is not listed in the California Historical Landmarks and Points of Historical Interest, or State Historic Structures, and the proposed project would not demolish any structures that can potentially meet any of criteria listed above (California State Parks 2023). Therefore, there are no resources on the campuses that would be considered historically significant pursuant to Section 15064.5. No impact would occur.

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

Less Than Significant Impact With Mitigation Incorporated. Implementation of the proposed project would result in ground disturbance to construct a two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen. Earthwork associated with the proposed project would include grading. The proposed project would occur within the boundaries of an existing Sky View ES campus that has already been developed with associated structures and facilities including classroom buildings, administration buildings, and athletic facilities (baseball fields and open fields). As such, the potential discovery of archaeological resources would be minimal.

However, ground-disturbing activities from the proposed project may have the potential to uncover unknown archaeological resources and, therefore, could result in a potentially significant impact. Implementation of Mitigation Measure CUL-1 would ensure that in the event archaeological resources are discovered during ground-disturbing activities, archaeological resources would be recovered in accordance with State and federal requirements. If archaeological resources are discovered during ground disturbing activities all ground distributing activities shall halt and a qualified archeologist would be retained to assess such findings. Implementation of Mitigation Measure CUL-1 would reduce impacts to archaeological resources to less than significant.

Mitigation Measures

CUL-1 Prior to the commencement of grading activities, the District shall ensure that an archaeologist who meets the Secretary of the Interior's (SOI) standards for professional archaeology has been retained for the proposed project and will be on-call during all grading and other significant ground-disturbing activities that would occur beneath the existing artificial fill. The qualified archaeologist shall ensure that the following measures are followed for the proposed project:

- Prior to any ground disturbance, the Qualified Archaeologist will conduct a preconstruction Cultural Resources Awareness Training (CRAT) to familiarize the members of the construction team overseeing or conducting ground-disturbing activities with the archaeological sensitivity of the project area, the potential to encounter archaeological resources, the types of archaeological material that could be encountered, and procedures to follow if archaeological deposits and/or artifacts are encountered during construction. The SOI-qualified archaeologist shall prepare and distribute a brochure describing the appropriate actions to take if any archaeological resources are encountered.
- Prior to any ground disturbance, the (SOI)-qualified archaeologist shall prepare an Archaeological and Tribal Monitoring Plan that outlines the methods to be undertaken during monitoring and the steps to be taken in the event of an archaeological discovery.

- In the event that a prehistoric archeological site indicators (such as obsidian and chert flakes and chipped stone tools; grinding and mashing implements [e.g., slabs and hand stones, and mortars and pestles]; bedrock outcrops and boulders with mortar cups; and locally darkened midden soils) or a historic-period archaeological site indicators (such as fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits [e.g., wells, privy pits, dumps]), is uncovered during grading or other construction activities, all ground-disturbing activity within 50 feet of the discovery shall be halted. The District shall be notified of the potential find and a qualified archeologist shall be retained to investigate its significance (CEQA Guidelines15064.5[f]).
- If significant Native American cultural resources are discovered for which a treatment plan must be prepared, the District or the archaeologist on-call shall contact the applicable Native American tribal representative(s). If requested by the Native American tribe(s), the District or archaeologist on call shall, in good faith, consult on the discovery and its disposition (e.g., avoidance, preservation, reburial, re-turn of artifacts to tribe).

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact. There are no cemeteries or known human remains at the campus, which has been previously disturbed during construction of the existing school; however, ground disturbance activities (i.e., grading, utility trenching and drill holes) would have the potential to result in discovery of human remains. In the unlikely event human remains are discovered, the District would be responsible for compliance with Health and Safety Code section 7050.5 and CEQA Guidelines section 15064.5. California Health and Safety Code section 7050.5 states that no further disturbance shall occur until the county coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to their treatment and disposition has been made. If the Riverside County coroner determines the remains to be Native American, the Native American Heritage Commission (NAHC) shall be contacted within 24 hours. Subsequently, the NAHC shall identify the most likely descendant. The most likely descendant shall then make recommendations and engage in consultations concerning the treatment of the remains, as provided in Public Resources Code section 5097.98. Adherence to existing legal requirements associated with human remains would reduce impacts associated with the disturbance of human remains. Impacts would be less than significant.

4.6 ENERGY

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. The following discusses the potential energy demands from construction and operation of the proposed project.

Short-Term Construction Impacts

Construction of the proposed project would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use.

Electrical Energy

The majority of construction equipment would be gas or diesel powered, and electricity would not be used to power most of the construction equipment. Electricity use during construction would vary during different phases of construction. Later construction phases could result in the use of electric-powered equipment for interior construction and architectural coatings. It is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws) and lighting, which would result in minimal electricity usage during construction activities. Therefore, project-related construction activities would not result in wasteful or unnecessary electricity demands, and impacts would be less than significant.

Natural Gas Energy

It is not anticipated that construction equipment used for the proposed project would be powered by natural gas, and no natural gas demand is anticipated during construction. Therefore, impacts would be less than significant with respect to natural gas usage.

Transportation Energy

Transportation energy use during construction of the proposed project would come from delivery vehicles, transport trucks, and construction employee vehicles. In addition, transportation energy demand would come

4. Environmental Analysis

from use of off-road construction equipment. It is anticipated that the majority of off-road construction equipment, such as those used during site preparation and grading, would be gas or diesel powered.

The use of energy resources by vehicles and equipment would fluctuate according to the phase of construction and would be temporary. In addition, all construction equipment would cease operating upon completion of project construction. Thus, impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Furthermore, to limit wasteful and unnecessary energy consumption, the construction contractors are anticipated to minimize nonessential idling of construction equipment during construction, in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9. Construction trips would also not result in unnecessary use of energy since the project site is centrally located and is served by the regional freeway systems (e.g., Interstate 215, State Route 74, and State Route 60) that provide the most direct routes from various areas of the region. Thus, energy use during construction of the project would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant.

Long-Term Impacts During Operation

Operation of the proposed project would generate new demand for electricity (e.g., lighting and cooling), natural gas (e.g., heating), and transportation energy (e.g., vehicle trips associated with new students).

Electrical and Natural Gas Energy

The proposed increase in electricity and natural gas consumption from the proposed project are shown in Table 9, *Operation-Related Energy Consumption*.

Table 9 Operation-Related Energy Consumption

Land Use[1]	Electricity (kWh/year)[1,2]	Natural Gas (kBTU/year)[1]
Proposed Project	134,262	493,891

Source: CalEEMod v. 2022.1.
Note: kWh=kilowatt-hour; kBTU=kilo-British Thermal Unit
1 Based on CalEEMod default energy rates.
2 The proposed project would install an onsite PV system which is projected to generate 53,347 kWh per year of renewable energy.

While the proposed project would generate additional energy demand at the site, it would be required to comply with the applicable Building Energy Efficiency Standards and CALGreen requirements. Compliance with the current Building Energy Efficiency Standards and CALGreen would be consistent with the goals outlined in Appendix F of the CEQA Guidelines, as the proposed project would promote the use of renewable energy and decrease reliance on fossil fuels to meet the energy demands of the proposed project. The 2022 Building Energy Efficiency Standards include prescriptive photovoltaic (PV) system standards for non-residential land uses, including schools. Compliance with the prescriptive standards would result in the installation of on-site PV systems. The proposed project would include installation of an onsite PV system, which is anticipated to generate up to 53,347 kWh per year of renewable electricity.

4. Environmental Analysis

In addition to the proposed building energy efficiency, Southern California Edison is required to comply with the state's renewable portfolios standard (RPS), which mandates utilities to procure a certain proportion of electricity from eligible renewable and carbon-free sources and increasing the proportion through the coming years with an ultimate procurement requirement of 100 percent by 2045. The RPS requirements would support use of electricity by the proposed project that is generated from renewable or carbon-free sources. Overall, the proposed project would generally be consistent with the goals outlined in Appendix F of the CEQA Guidelines regarding increasing energy efficiency, decreasing reliance on fossil fuels, and increasing renewable energy sources. Because the proposed project would comply with these regulations, it would not result in wasteful, inefficient, or unnecessary electricity demands. Therefore, impacts are considered less than significant and no mitigation measures are required.

Transportation Energy

The proposed project would result in the consumption of transportation energy during operation from the use of motor vehicles associated with residents. Because the efficiency of the motor vehicles in use with the proposed project is unknown—such as the average miles per gallon—estimates of transportation energy use are based on the overall vehicle miles traveled (VMT) and related transportation energy use. Table 10, *Operation-Related Fuel Usage*, shows the anticipated transportation fuel demand associated with the proposed project at buildout.

Table 10 Operation-Related Fuel Usage

	Gas		Diesel		Compressed Natural Gas		Electricity	
Vehicle Type	VMT/year[1]	Gallons/year	VMT/year[1]	Gallons/year	VMT/year[1]	Gallons/year	VMT/year[1]	kWh/year
On-Road Vehicles	1,538,248	59,499	95,438	9,193	2,234	221	76,155	27,591

Source: EMFAC2021 v.1.0.2.
Notes:
[1] Overall VMT of 1,712,075 miles per year is based on project-related trip generation data provided by Garland Associates (see Appendix A) and CalEEMod trip lengths and trip type defaults.

Overall, the annual VMT for the proposed project is estimated to be 1,712,075 miles per year. While the proposed project would result in an increase in total VMT, as discussed in Section 4.17(b) of this IS/MND, the proposed school expansion project is considered a local serving project and would result in less than significant VMT impacts. As discussed in Section 4.15(a) of this IS/MND, expansion of the existing school and increasing student capacity would accommodate and serve the existing community, which could contribute to reducing the necessity for students in the existing community to travel to a school farther away. Thus, overall, because the proposed project would be local serving and be considered a VMT benefit, it would also contribute to decreasing demand on transportation fuels.

Moreover, the general fuel efficiency of vehicles with each passing year would improve on average. The improvement in fuel efficiency would be attributable to the statewide fuel reduction strategies and regulatory compliances (e.g., CAFE standards), resulting in new cars that are more fuel efficient and the attrition of older, less fuel-efficient vehicles. The CAFE standards are not directly applicable to land use development projects, but to car manufacturers. Thus, drivers do not have direct control in determining the fuel efficiency of vehicles

4. Environmental Analysis

that are manufactured and available. However, compliance with the CAFE standards by car manufacturers would ensure that vehicles produced in future years have greater fuel efficiency and would generally result in an overall benefit of reducing fuel usage by providing the population of the project site's region more fuel-efficient vehicle options. In addition, because electricity generated in California is required to meet the increasing renewable energy mix requirements under the State's RPS, a greater and greater share of electricity consumed for transportation energy demand under the proposed project would be sourced from renewable energy sources rather than fossil fuels. Overall, for these reasons, the proposed project would not be considered inefficient, wasteful, or unnecessary as it pertains to demand of transportation fuels. Therefore, energy impacts as it pertains to operation-related transportation energy would be less than significant and no mitigation measures are required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The following evaluates consistency of the proposed project with California's Renewables Portfolio Standard program.

California Renewables Portfolio Standard Program

The state's electricity grid is transitioning to renewable energy under California's Renewable Energy Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources is generally considered carbon neutral. Executive Order S-14-08, signed in November 2008, expanded the state's RPS to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (Senate Bill [SB] X1-2). 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.

On September 10, 2018, Governor Brown signed SB 100, which supersedes the SB 350 requirements. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 50 percent by 2026, 52 percent by 2027, and 60 percent by 2030. The bill also established 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. Additionally, SB 1020 adds interim targets to SB 100 framework to require renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent of all retail electricity sales by 2040. Under SB 100 and SB 1020, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The statewide RPS goal is not directly applicable to individual development projects, but to utilities and energy providers such as SCE, which is the utility that would provide all of electricity needs for the proposed project. Compliance of SCE in meeting the RPS goals would ensure the state is meeting its objective in transitioning to renewable energy. In addition, the proposed project would install an onsite PV system. Thus, implementation of the proposed project would not conflict with or obstruct implementation of California's RPS Program, and no impact would occur.

4.7 GEOLOGY AND SOILS

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	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.				X
	ii) Strong seismic ground shaking?			X	
	iii) Seismic-related ground failure, including liquefaction?			X	
	iv) Landslides?			X	
b)	Result in substantial soil erosion or the loss of topsoil?			X	
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
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?			X	
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?				X
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

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. The Alquist-Priolo Earthquake Fault Zoning Act requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development and prohibit construction on or near active fault traces to reduce hazards associated with fault rupture. The Alquist-Priolo Earthquake Fault Zones are the regulatory zones that include surface traces of active faults. There are no known faults that pass through the campus, and the campus is not located within an Alquist-Priolo Fault Zone (CGS 2024a). The nearest active fault is the Casa Loma Section of the San Jacinto Fault, approximately 7.6 miles east of the campus (CGS 2024a; Google Earth Pro 2024). Therefore, there would be no impact associated with rupture of a known earthquake fault.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The campus is situated in a seismically active region. As is the case for most areas of southern California, ground-shaking resulting from earthquakes associated with nearby and more distant faults may occur at the campus. The closest major active faults are the San Jacinto Fault and the Elsinore Fault. These faults could have the potential to generate strong seismic ground shaking at the campus during an earthquake event. During the operation of the proposed development, seismic activity associated with active faults can be expected to generate moderate to strong ground shaking at the campus.

All proposed structures would be designed and built in accordance with applicable current building codes and standards. The most recent building standard adopted by the legislature and used throughout the state is the 2022 version of the California Building Code (CBC) (24 CCR Part 2). These codes provide minimum standards to protect property and the public welfare and 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 onsite, and the strength of ground motion with specified probability of occurring at the site. Construction of the proposed project would adhere to the most recent version of the CBC. The proposed project design would be approved by the Division of the State Architect (DSA) and construction would be monitored by a DSA-approved inspector. The proposed project would comply with the legal requirements school construction implemented to reduce impacts associated with strong seismic ground shaking. Impacts associated with strong seismic ground shaking would be less than significant

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction is the sudden decrease in the strength and stiffness of unconsolidated, saturated cohesionless soils typically resulting from seismic ground shaking. For soils to liquefy, the intensity and duration of the seismically induced cyclic loading must be sufficient to increase the excess pore water pressures to such an extent that the effective stresses on the soil particles reduces to zero. If liquefaction is initiated, the saturated soils behave temporarily as a viscous fluid and, consequently, lose their capacity to support the structures founded on them.

The campus is not located within a mapped potential liquefaction zone per the State of California Seismic Hazard Zones Map (CGS 2024b). As previously described in Section 3.7(a)(ii), the proposed project would be required to comply with the most current CBC, and the DSA criteria for seismic activity, including from liquefaction impacts. Therefore, compliance with CBC and DSA standards would reduce potential impacts related to liquefaction to less than significant.

iv) Landslides?

Less Than Significant Impact. Significant landslides and erosion typically occur on steep slopes where stormwater and high winds can carry topsoil down hillsides. The campus is not located within a landslide zone or within an area mapped as potentially susceptible to seismically-inducted landslides (CGS 2024c). The campus is relatively level with no steep slopes or significant topography on or near the campus. Implementation of the proposed project would not expose people or structures to substantial adverse hazards due to landslides, and impacts would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Erosion is the movement of rock and soil from place to place. Erosion occurs naturally by agents such as wind and flowing water; however, grading and construction activities can greatly increase erosion if effective erosion control measures are not used. Common means of soil erosion from construction sites include water, wind, and being tracked off-site by vehicles. The construction contractor would be required to take all measures deemed necessary during grading to provide erosion control devices in order to protect exposed soil and adjacent properties from storm damage and flood hazard originating on the Proposed Project. The proposed project would be required to comply with National Pollutant Discharge Elimination System (NPDES) permit requirements to control pollutants from being discharged into the water. Under the NPDES permit, which applies to grading activities of more than one acre and is administered under the Regional Water Quality Control Board (RWQCB), the District would be required to prepare and implement a Storm Water Pollution Prevention Program (SWPPP), including a best management practices (BMP) program to address construction-related discharges. BMPs include, but are not limited to, the implementation of erosion and sediment controls. Because construction would occur throughout the year, erosion-control BMPs must be implemented to ensure that sediment is confined to the construction area and not transported off-site. During construction, all stormwater runoff would be diverted to the appropriate catch basins and drainage channels subject to all applicable regulatory statute.

Soil erosion during the operation of the proposed project would be controlled by implementation of an approved landscape and irrigation plan, installation, and maintenance of post-construction BMPs, and paving of surface parking areas.

Adherence to the NPDES permit requirements and preparation of the SWPPP, and adherence to the erosion-control standards of the most current CBC would minimize the potential for erosion. The proposed project would have a less-than-significant impact associated with soil erosion or loss of topsoil.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. The project site is in an area described as having younger alluvium overlaying older fan alluvium. The project site is located in the City of Perris, which is underlain by a stable geologic structure called the Perris Block (Woodford et al. 1971). Alluvial fans are a concern for areas underlain with alluvial deposits such as the project site. Alluvial fan deposits may present a unique hazard when combined with flooding. In the event collapse may occur, the City of Perris code 15.07.030 explains an alluvial fan task force would be convened if the site is in the area of an alluvial fan (Perris 2014). The site, however, is in a relatively flat area and not downslope of any areas that may present alluvial fan hazards.

Hazards from liquefaction are addressed above in Section 3.7(a[iii]), and landslide hazards are addressed above in Section 3.7(a[iv]) As concluded in these sections, impacts would be less than significant.

Following is a discussion of the potential impacts resulting from other site geologic and soil conditions of the project site.

Lateral Spreading

Seismically induced lateral spreading involves primarily lateral movement of earth materials due to ground shaking. It differs from the slope failure in that complete ground failure involving large movement does not occur due to the relatively smaller gradient of the initial ground surface. Lateral spreading is demonstrated by near-vertical cracks with predominantly horizontal movement of the soil mass involved. Due to the relatively flat nature of the project site and compliance with the most current CBC and DSA criteria, impacts related to lateral spreading would be less than significant.

Ground Subsidence

The major cause of ground subsidence is the excessive withdrawal of groundwater. Soils with high silt or clay content are particularly susceptible to subsidence. The proposed project soil content is primarily composed of loamy soil and does not contain any clays. The proposed project site's soil content does not contain clays or silt (USDA 2024). The proposed project would not include earthwork to extreme depths and would not result in excessive withdrawal of groundwater during construction or operation. Therefore, impacts associated with subsidence would be less than significant.

Collapsible Soils

Collapsible soils are typically geologically young, unconsolidated sediments of low density that may compress under the weight of structures. As such, the proposed project would be developed in compliance with applicable laws pertaining to school construction (required by the DSA), including the CBC, and implement recommendations per the final engineering-level geotechnical report. Therefore, impacts associated with collapsible soils would be less than significant.

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

Less Than Significant Impact. Expansive soils contain certain types of clay minerals that shrink when they dry out and swell when soil becomes wet, resulting in the potential for cracking building foundations and in some cases, structural distress of the buildings themselves. Arid or semiarid areas with seasonal changes of soil moisture experiences, such as Southern California, have a higher potential of expansive soils than areas with higher rainfall.

The United States Department of Agriculture (USDA) maintains an interactive map that shows site-specific soil data. According to the USDA Web Soil Survey, the proposed project soil content is primarily composed of Domino silt loam, saline-alkali and does not contain any clays (USDA 2024). Although unlikely, clay soils may exist beneath the proposed project site; however, as described previously in Section 5.7(a), compliance with the CBC and DSA would ensure adequate structural integrity. Therefore, expansive soils are expected to have a less-than-significant impact on direct or indirect risk to life or property.

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. The proposed project would not include the installation or use of septic tanks or alternative wastewater disposal systems. The proposed project would connect to the existing sanitary sewer system for wastewater disposal. Thus, no impact related to alternative wastewater disposal systems would occur.

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

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

The project site is generally flat and vacant of any geologic structures. According to the City of Perris, Conservation Element, the project site is located in Paleontological Sensitivity area 5. This zone is described as having Low to High Sensitivity, with geologic components made up of younger alluvium overlaying older fan alluvium at depth (Perris 2008).

Additionally, the project site has been developed as an elementary school. The proposed project would include earthwork including trenching and grading. The operational phase would not include any subsurface activities. While fossils are not expected to be discovered during project construction, it is possible that fossils could be discovered during grading activities. Unknown fossils encountered during excavation would have the potential to be unintentionally damaged.

Though it is unlikely that paleontological resources would be discovered on the project site, implementation of Mitigation Measure GEO-1, which outlines precautionary measures and action measures for an event resulting in the discovery of unknown paleontological resources, would ensure that impacts to unknown paleontological resources are less than significant.

Mitigation Measure

GEO-1 In the event that fossils or fossil locality deposits are discovered during construction, excavation within 100 feet of the fossil locality shall be temporarily halted until removal occurs. The contractor shall notify a qualified paleontologist to investigate its significance. If the fossil locality is determined to be significant by the qualified paleontologist, the paleontologist shall work with the Perris Elementary School District to follow accepted professional standards, such as further testing for evaluation or data recovery, as necessary. The paleontologist shall

4. Environmental Analysis

notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project based on the qualities that make the resource important.

4.8 GREENHOUSE GAS EMISSIONS

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

The analysis in this section is based in part on the following studies, which are in Appendix A and Appendix B, respectively, of this Initial Study.

- *Air Quality and Greenhouse Gas Emissions Data, PlaceWorks,* December 2024
- *Construction Health Risk Assessment, PlaceWorks,* December 2024

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The primary source of these GHG 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 within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[2]

Information on manufacture of cement, steel, and other "life cycle" emissions that would occur as a result of the project are not applicable and are not included in the analysis.[3] Black carbon emissions are not included in the GHG analysis because the California Air Resources Board (CARB) does not include this pollutant in the state's Senate Bill 32 (SB 32) and Assembly Bill 1279 (AB 1279) inventory and treats this short-lived climate

[2] 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, but part of the feedback loop rather than a primary cause of change.

[3] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses 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 (CNRA 2018). Because the amount of materials consumed during the operation or construction of the project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

pollutant separately.[4] A background discussion on the GHG regulatory setting and GHG modeling can be found in Appendix A to this Initial Study.

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. 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 result in the development of a new two-story classroom building and addition to an existing school campus building, which would increase student capacity by a maximum of 324 students. Operation of the proposed project would generate 740 new weekday vehicle trips and would result in an increase in water demand, wastewater and solid waste generation, area sources (e.g., consumer cleaning products), refrigerants, and energy use. Annual project-related construction emissions were amortized over 30 years and included in the emissions inventory to account for GHG emissions from the construction phase of the project (South Coast AQMD 2009). The project-related GHG emissions are shown in Table 11, *Project-Related GHG Emissions*. As shown in the table, the primary sources of GHG emissions are mobile sources. However, development and operation of the proposed project would not generate annual emissions that exceed the South Coast AQMD bright-line threshold of 3,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year (South Coast AQMD 2010). Therefore, the proposed project's cumulative contribution to GHG emissions would be less than significant and no mitigation measures are required.

Table 11 Project-Related GHG Emissions

Source	$MTCO_2e$/year	Percent of Project Total
Mobile	627	88
Area	<1	<1
Energy[1]	59	8
Water	3	<1
Waste	8	1
Refrigerants	<1	<1
Amortized Construction Emissions[2]	11	2
Total Emissions	708	100
South Coast AQMD's Bright-Line Threshold[9]	3,000	n/a
Exceeds Bright-Line Threshold	No	n/a

[4] Particulate matter emissions, which include black carbon, are analyzed in Section 3.3, Air Quality. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The state's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017).

Table 11 Project-Related GHG Emissions

Source	$MTCO_2e$/year	Percent of Project Total

Source: CalEEMod Version 2022.1.
Notes: "<1" = a value less than 1; $MTCO_2e$: metric tons of carbon dioxide-equivalent
Manual summation of totals may not equal to the totals shown due to rounding.
1 Does not account for the emissions reductions associated with the projected 53,347 kWh/yr of renewable electricity that would be generated by the proposed onsite PV system that would be installed.
2 Construction emissions are amortized over a 30-year project lifetime per recommended South Coast AQMD methodology (South Coast AQMD 2009).

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and the SCAG's RTP/SCS. A consistency analysis with these plans is presented below.

CARB Scoping Plan

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

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

Other statewide strategies to reduce GHG emissions include the low carbon fuel standards, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the CAFE standards, and other early action measures necessary to ensure the State is on target to achieve the GHG emissions reduction goals of AB 32, SB 32, and AB 1279. In addition, new developments are required to comply with the current Building Energy Efficiency Standards and California Green Building Standards Code (CALGreen). The proposed project would comply with these GHG emissions reduction measures since they are statewide strategies. The proposed project GHG emissions would be further reduced from compliance with statewide measures that have been adopted since AB 32, SB 32, and AB 1279 were adopted. Thus, the proposed project would not obstruct or conflict with implementation of the 2022 Scoping Plan. Therefore, no impacts would occur and no mitigation measures are required.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SCAG adopted the 2024-2050 RTP/SCS (Connect SoCal 2024) in April 2024 (SCAG 2024). Connect SoCal 2024 identifies that land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options are consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in Connect SoCal 2024 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 2024). Connect SoCal 2024'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 2024, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region.

Connect SoCal 2024 does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers. As discussed in Section 4.17(b) of this IS/MND, the proposed school expansion project is considered a local serving project and would result in less than significant VMT impacts. Thus, the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in Connect SoCal 2024. Therefore, no impacts would occur and no mitigation measures are required.

4.9 HAZARDS AND HAZARDOUS MATERIALS

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?			X	
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 or excessive noise for people residing or working in the project area?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less Than Significant Impact. Hazardous materials associated with the proposed project would consist mostly of construction-related equipment and materials. Use and/or storage of hazardous materials at the campus are expected to be minimal and would not constitute a level that would be subject to regulation.

Construction

During the construction phase, hazardous materials in the form of solvents, glues, and other common construction materials containing toxic substances may be transported to the site, and construction waste that possibly contains hazardous materials could be transported off-site for disposal. Federal, state, and local regulations govern the disposal of wastes identified as hazardous that could be produced during removal of existing asphalt and storage buildings, as well as during construction activities. The use, storage, transport, and disposal of construction-related hazardous materials and waste would be required to conform to existing laws and regulations. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts. For example, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations for the cleanup and disposal of that contaminant. All contaminated waste encountered would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. Furthermore, strict adherence to all emergency response plan requirements set forth by the City of Perris and the County of Riverside would be required through the duration of the proposed project's construction.

Operation

Operation of the proposed project would involve the limited use of hazardous materials for air conditioning, janitorial, maintenance, and repair activities. These materials would include commercial cleansers, lubricants, and paints. However, these types of materials are not considered acutely hazardous and would be used in limited quantities.

The use, storage, transport, and disposal of hazardous materials of the proposed project would be required to comply with existing regulations of several agencies, including the California Department of Toxic Substances Control, US Environmental Protection Agency (EPA), California Division of Occupational Safety and Health, California Department of Transportation, County of Riverside Department of Environmental Health, and the Riverside County Fire Department. Compliance with applicable laws and regulations governing the use, storage, transport, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts to occur. Therefore, hazards to the public or the environment arising from the routine use, storage, transport, and disposal of hazardous materials during the proposed project's operation would not occur. Impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. As described above, construction of the project could potentially involve the use and disposal of hazardous materials commonly used in construction and maintenance school facilities. However, all chemical applications would be transported, handled, and disposed of in accordance with all applicable federal, state, and local laws and regulations pertaining to the management and use of hazardous materials. Potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. Thus, the use of these materials for their intended purpose would not pose a significant risk to the public or environment.

In the event of a reasonably foreseeable upset and accident regarding the release of hazardous materials, procedures and policies would be followed to remove the materials in a safe and timely manner. The State of California Office of Emergency Services provides a Hazardous Material Incident Contingency Plan, which outlines the procedures and responsibilities of agencies and private organizations concerning hazardous materials emergencies. The Riverside County Department of Environmental Health, which is the Certified

Unified Program Agency, has a Hazardous Materials Management District that oversees the participating agencies that implement hazardous materials programs in the county (Riverside County 2024). Riverside County outlines the locations for regional and local locations for facilities that dispose of hazardous wastes within the county as well as procedures for residential and business-related hazardous wastes (Riverside County 2024).

Implementation of the project would follow the appropriate procedures and policies mentioned above and other applicable federal and state regulations. Therefore, the potential for hazardous materials impacts through reasonably foreseeable upset and accident conditions during construction or operation of the project would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. Based on a review of Google Earth, no school sites other than the project site were identified within a quarter mile of the project site. Additionally, as substantiated in Sections 5.9.a and 5.9.b, the proposed project does not include elements or aspects that would create or otherwise result in hazardous emissions. Therefore, no impact would occur, and no mitigation measures are necessary.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant Impact. California Government Code Section 65962.5 requires referencing a list of hazardous materials sites, hazardous waste discharges for which the State Water Control Board has issued certain types of orders, public drinking water wells collecting detectable levels of organic contaminants, underground storage tanks with reported unauthorized releases, and solid waste disposal facilities from which hazardous waste has migrated.

Four environmental lists were searched for hazardous materials on the project site:

- **GeoTracker.** State Water Resources Control Board (SWRCB 2024)
- **EnviroStor.** Department of Toxic Substances Control (DTSC 2024a)
- **Solid Waste Information System (SWIS).** California Department of Resources Recovery and Recycling (CalRecycle 2024)
- **Cortese List.** Department of Toxic Substances Control (DTSC 2024b)

Based on the review of the preceding databases, the project site does not appear in any of the four databases and is not located on or within 0.25 mile of a hazardous materials site. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. The closest public airport to the project site is the Perris Valley Airport, approximately 1.66 miles southwest of the project site. The entire project site is within two miles of Perris Valley Airport. According to the Riverside County Airport Land Use Compatibility Plan, a small portion in the southwest corner of the project site is in Zone E of the Perris Valley Airport Influence Area. Zone E is defined as "Other Airport Environs with a low noise impact and risk level." Additionally, there are no height or building restrictions (Riverside County 2010). Therefore, this impact would be less than significant.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The City of Perris has a Local Hazard Mitigation Plan (LHMP) that was drafted in December 2023. The LHMP is a strategic document developed by the City to identify and assess potential risks posed by natural disasters and other emergencies. It outlines proactive measures to reduce the vulnerability of communities to hazards and to minimize loss of life, property damage, and economic disruption (City of Perris 2023). Additionally, the City has an Emergency Operations Plan (EOP) that was drafted in May, 2013 (City of Perris 2013).

Neither the LHMP or the EOP display any evacuation routes. However, the project is not proposing to construct off-site improvements that could impair the LHMP or EOP, and project construction activities would be confined to the Sky View ES campus. Therefore, impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less Than Significant Impact. As discussed further in Section 5.20, *Wildfire*, the project site is not in or near a state responsibility area (SRA) or on land classified as Very High Fire Hazard Severity Zone (FHSZ) (CAL FIRE 2023). The nearest FHSZ to the project site is approximately 1.5 miles west. As discussed in Section 5.20(b), the proposed project is in an urbanized area and is generally flat without significant topography, and there are no steep slopes where high winds can exacerbate wildfire risks. Project development would not place people or structures at risk from wildfire, and no wildlands exist within the immediate vicinity of the campus.

The proposed project would be designed in accordance with the California Building Code and California Fire Code. Project design plans would be reviewed by the DSA. Fire suppression equipment specific to construction would be maintained on-site. Additionally, project construction would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, the proposed project would not expose people or structures to a significant risk due to wildfires. Impacts would be less than significant.

4.10 HYDROLOGY AND WATER QUALITY

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in a substantial erosion or siltation on- or off-site;			X	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Would the project:

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

Less Than Significant Impact. A significant impact would occur if the proposed project discharges water that does not meet the quality standards of agencies that regulate surface water quality and water discharge into stormwater drainage systems. A significant impact would also occur if the proposed project does not comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB). The National Pollutants Discharge Elimination System program regulates industrial pollutant discharges, including construction activities for sites larger than one acre. The proposed project would be constructed in an area that is already developed. The existing elementary school campus comprises approximately 8.6 acres, and the proposed project location would encompass approximately 1.3 acres of the existing play area.

4. Environmental Analysis

New construction projects can result in two types of water quality impacts: (1) short-term impacts from discharge of soil through erosion, sediments, and other pollutants during construction and (2) long-term impacts from impervious surfaces (buildings, roads, parking lots, and walkways) that prevent water from being absorbed/soaking into the ground, thereby increasing the pollutants in stormwater runoff. Impervious surfaces can increase the concentration of pollutants such as oil, fertilizers, pesticides, trash, soil, and animal waste in stormwater runoff. Runoff from short-term construction and long-term operation can flow directly into lakes, local streams, channels, and storm drains and eventually be released untreated into the ocean.

Construction

Clearing, grading, excavation, and construction activities associated with the proposed project may impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. 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.

As part of Section 402 of the Clean Water Act, the EPA has established regulations under the NPDES program to control direct stormwater discharges. The NPDES program regulates industrial pollutant discharges, which include construction activities. In California, the SWRCB administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. Requirements for waste discharges potentially affecting stormwater from construction sites of one acre or more are set forth in the SWRCB's Construction General Permit Order No. 2022-0057-DWQ, which became effective September 1, 2023. The site is larger than one acre and would be subject to the requirements of the Construction General Permit. Projects obtain coverage under the Construction General Permit by filing a Notice of Intent with the SWRCB prior to grading activities and preparing and implementing a SWPPP during construction. The primary objective of the SWPPP is to identify, construct, implement, and maintain BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the project site, and to contain hazardous materials. BMP categories include, but are not limited to, erosion control, wind erosion control, sediment control, tracking control, non-storm water management controls, and waste management controls. Implementation of BMPs and monitoring required under the SWPPP would reduce, minimize, reduce and or treat pollutants and prevent short-term intermittent impacts to water quality from construction activities to less than significant levels.

Operation

The proposed project would exhibit runoff similar to existing conditions on campus. After completion of the proposed project, ground surfaces at the project site would be either hardscape or maintained landscaping, as with current conditions, and no large areas of exposed soil would be left to erode off the campus. In general, projects must control pollutants, pollutant loads, and runoff volume from the project site by controlling runoff through infiltration or bioretention. Additionally, the proposed project would implement BMPs to control the amount and quality of the stormwater leaving the project site, and the proposed project would not violate any water quality. Thus, impacts would be less than significant.

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

Less Than Significant Impact. The City of Perris is located within the San Jacinto River Watershed that is divided into 14 groundwater subbasins. The City lies above three subbasins that were combined into two groundwater management zones, north and south. The project site is in the North Perris management zone. Water supplies of the North Perris Water System come from four groundwater wells. The Eastern Municipal Water District (EMWD) provides water services to the City of Perris. EMWD receives imported water from the Metropolitan Water District of Southern California that is used to serve approximately half of EMWD's service aera. The City purchases approximately 640 million gallons of water each year from EMWD, approximately 1.8 million gallons of water every day. Approximately 20 percent of EMWD's potable water demand is supplied by EMWD groundwater wells (EMWD 2024). The majority of the groundwater produced by EMWD comes from its wells in the cities of Hemet and San Jacinto (EMWD 2021). The EMWD 2020 Urban Water Management Plan determined a high degree of reliability and expects to meet demands through 2045 during normal and dry conditions (EMWD 2021).

The proposed project would be constructed in an area that is already developed. Although the proposed project would increase student enrollment, it would not substantially impact water the EWMD ability to supply water. Therefore, impacts would be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in a substantial erosion or siltation on- or off-site?

Less Than Significant Impact. As discussed in Section 3.10(a), the proposed project would be required to comply with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ) issued by the SWRCB. Compliance with the required regulation and implementation of BMPs recommended in the SWPPP would ensure that the proposed project does not result in substantial erosion or siltation on- or off-site. Once the construction phase is completed, no untreated or exposed soils that are susceptible to erosion or siltation would remain. Additionally, there are no streams or rivers on the project site. The school is fully developed, and the new buildings would not result in a significant increase in impermeable surfaces on the project site. Impacts would be less than significant.

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

Less Than Significant Impact. The proposed project would construct a two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen. The drainage pattern of the proposed project would be like existing conditions. The proposed project would not involve the alteration of any natural drainage or watercourse. The proposed project would protect existing stormwater drainage and connect to existing building storm drains. Additionally, compliance with

SWRCB policies and implementation BMPs will ensure the proposed project would not substantially increase the rate or amount of surface runoff. Impacts would be less than significant.

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

Less Than Significant Impact. The campus is already built out with hardscape and impervious surfaces. The proposed project would not involve the alteration of any natural drainage or watercourse. The proposed project would only result in an increase of impervious surfaces on the project site, and the majority of the project site would remain in its current state.

Therefore, the proposed project would generate stormwater similar to existing conditions. Stormwater that does not percolate into the ground would be directed to existing storm drains and to surrounding storm drains in the public right-of-way. As discussed in Section 5.10(a), the proposed project would be required to implement BMPs that would control the amount of stormwater leaving the project site. Specifically, the project site would be graded to allow for drainage and BMPs, which would ensure runoff would leave the project site at a rate similar to existing conditions. The small quantities of hazardous materials used on-site would be properly handled, stored, and used. The proposed project would not exceed the capacity of existing stormwater drainage systems and would not create substantial additional sources of polluted runoff. Therefore, impacts would be less than significant.

iv) Impede or redirect flood flows?

Less Than Significant Impact. The campus is located within Federal Emergency Management Act (FEMA) Flood Zone AE which is defined as an area of the 100-year floodplain for which base flood elevations and flood hazards have been determined. According to the FEMA website, this is an area determined to have a 1 percent chance of flooding annually and a 26 percent chance overall over a 30-year period (FEMA 2022). This is usually due to the proximity of an existing waterway. In this case, there is a storm drainage system south of the project site. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam or other artificial body of water. There are no adjacent body of water that would pose a flood hazard to the site due to a seiche. Therefore, the project site is not at risk of inundation by seiche.

As mentioned in Section 3.10(c)(iv), the school site is in Flood Zone AE, which signifies areas of the 100-year floodplain for which base flood elevations and flood hazards have been determined. Additionally, the project site is outside the tsunami hazard zone as identified by the California Department of Conservation Tsunami Hazard Area Map (DOC 2022a) and would not be affected by a tsunami. The proposed project would not release pollutants as the result of floods, tsunami, or seiche. Therefore, impacts would be less than significant.

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

No Impact. Construction of the proposed project would be subject to the Statewide Construction General Permit and implementation of BMPs specified in the SWPPP. Additionally the proposed project would be required to comply with the NPDES General Permit for Storm Water Discharges. After completion of the proposed project, ground surfaces would be either hardscape or maintained landscaping. As indicated in Response 3.10(b), the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge. The proposed project would not obstruct implementation of a water quality control plan. Therefore, no impact would occur.

4.11 LAND USE AND PLANNING

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				X
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?				X

Would the project:

a) Physically divide an established community?

No Impact. The project site is located within an established and currently operating elementary school campus. The surrounding area is mixed with current residential uses and parcels zoned for residential uses. The proposed project's construction and operational activities would occur within the existing campus and would not divide an established community. Therefore, no impacts related to the physical division of an established community would result from the proposed project.

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. A significant impact could occur if the project is inconsistent with the City's General Plan, zoning, or other plans that apply to the project site and were adopted for the purposes of avoiding or mitigating environmental effects. The current zoning designation of the project site is Residential 10,000 (R 10,000), which allows for the development of detached single-family residential development at a density of 2 to 4 dwellings per net acre. Schools and educational institutions are allowed with a conditional use permit (City of Perris 2024a). The project site is consistent with the R 10,000 land use designation. The proposed project's development would not require modification to the site's General Plan land use and zoning designations. Development of the proposed project would not conflict with any applicable land use plans, policies, or regulations. Therefore, no impact would occur.

4.12 MINERAL RESOURCES

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	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?				X
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?				X

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. In 1975, the state legislature adopted the Surface Mining and Reclamation Act. This designated mineral resources zones (MRZ) that were of statewide or regional importance. The classifications used to define MRZs are:

- **MRZ-1.** Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.
- **MRZ-2.** Areas where the available geologic information indicates that there are significant mineral deposits or that there is a likelihood of significant mineral deposits.
- **MRZ-3.** Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined.
- **MRZ-4.** Areas where there is not enough information available to determine the presence or absence of mineral deposits.

The campus is mapped MRZ-4 by the California Geological Survey. According to the Department of Conservation's California Geologic Emergency Management Division (CalGEM), no mineral resource recovery sites are on or in the immediate vicinity of the campus (DOC 2022b). The two nearest oil and gas wells to the campus are idle dry wells and are approximately 1.6 miles to the north. The nearest active well is approximately 3 miles to the south (DOC 2022b). There are no mines near the project site or within the City of Perris (DOC 2016). No mineral resources are identified on or near the campus in the City's General Plan. As a result, the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, and no impacts would occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. As discussed in 5.12(a), the campus is not mapped in a mineral resource area, a surface mining district, an oil drilling district, or a State-designated oil field. The campus has a Public land use designation and is developed with an operating elementary school campus. As such, it is not currently used for mineral resource extraction, and there are no plans to use the site for mineral resource extraction in the future due to the lack of presence of mineral resources. Additionally, the City of Perris General Plan EIR does not identify any sites that have been designated a locally important mineral resource recovery site (City of Perris 2005). Therefore, development of the proposed project would not cause a loss of availability of a mining site, and no impact would occur.

4.13 NOISE

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE. Would the project result in:					
a)	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?			X	
b)	Generation of excessive groundborne vibration or groundborne noise levels?			X	
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?			X	

The analysis in this section is based in part on the following study, which is in Appendix C of this Initial Study.

- *Noise Modeling Data, PlaceWorks*, December 2024

Environmental Setting

Noise is defined as unwanted sound. It 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, State of California, and City of Perris have established criteria to protect public health and safety and to prevent disruption of certain human activities. Noise modeling was prepared by PlaceWorks in October 2024; it is summarized herein and included as Appendix C. Additional information on noise and vibration fundamentals and applicable regulations are also contained in Appendix C.

Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. The City of Perris General Plan Noise Element identifies residences, schools, libraries, hospital, churches, offices, hotels, motels, and outdoor recreational areas. Residential uses are located to the west along Wilson Avenue, across Mildred Street to the north, and along Murietta Road to the east. Kingdom Hall of Jehovah's Witnesses, a church use, is located to the west; Patriot Park, an outdoor recreational use, is located to the southeast; and open space and agricultural uses are located to the south. The nearest noise-sensitive receptors to the project site are single-family residential uses to the north across West Mildred Street and to the west along Wilson Avenue.

Existing Conditions

The project site is in an area that is predominantly residential to the west of the project site and agricultural to the east. The existing noise environment is characterized primarily by traffic noise on Murietta Road, seasonal agricultural activities, and aircraft overflights. Typical conditions would include noise from children yelling and

4. Environmental Analysis

playing on the existing school campus; typical rural residential activities, birds, and wind noise also contribute to the existing ambient noise environment.

Traffic noise levels depend primarily on the speed of the traffic and the volume of trucks. The primary source of noise from automobiles is high-frequency tire noise, which increases with speed. Adjacent roadways that expose the project site to traffic noise include Murietta Road and Mildred Street. Existing traffic noise conditions were modeled using the FHWA's traffic noise prediction model (FHWA RD-77-108). Traffic volume data for the existing traffic volumes are provided by Garland Associates (2024). Table 12 , *Existing Traffic Noise Conditions, dBA CNEL at 50 Feet*, lists the modeled existing noise levels on project adjacent roadways at a distance of 50 feet from the nearest travel lane centerline and the distances to the 70 dBA, 65 dBA, and 60 dBA CNEL noise contours.

Table 12 Existing Traffic Noise, dBA CNEL at 50 Feet

Roadway	Segment		Existing Noise Level	Distance to Noise Contour (feet)		
	From	To		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Murrieta Road	Mildred St	School Dwy	58	8	17	38
Murrieta Road	School Dwy	the South	58	8	17	38
Mildred Street	School Dwy	Murrieta Rd	55	5	12	25

Source: Garland Associates (2024).
See Appendix C for calculations.

Applicable Standards

City of Perris General Plan

The Noise Element of the Perris General Plan establishes noise-related goals and land use compatibility standards. Based on Exhibit N-1 of Noise Element, the proposed school use would be considered Normally Acceptable with an exterior noise level of 60 dBA CNEL and Conditionally Acceptable with an exterior noise level of 65 dBA CNEL. The City has adopted the following applicable goals and policies:

Goal I. Land Use Siting Future land uses compatible with projected noise environments.

Implementation Measures

- **I.A.I** All new development proposals be evaluated with respect to the State Noise/Land use Compatibility Criteria. Placement of noise sensitive uses will be discouraged within any area exposed to exterior noise levels that fall into the "Normally Unacceptable" range and prohibited within areas exposed to "Clearly Unacceptable" noise ranges.

- **I.A.3** Acoustical studies shall be prepared for all new development proposals involving noise sensitive land uses, as defined in Section 16.22.020J of the Perris Municipal Code, where such projects are adjacent to roadways and within existing or projected roadways CNEL levels of 60 dBA or greater.

City of Perris Municipal Code

The City of Perris Municipal Code includes noise regulations in Chapter 7.34, Noise Control. Section 7.34.050, General Prohibition, establishes maximum exterior noise level limits at any point on the property line of the affected residential receivers. These standards are presented in Table 13, *Exterior Noise Level Standards*. The exterior noise level shall not exceed a maximum noise level of 80 dBA L_{max} during daytime hours (7:01 a.m. to 10:00 p.m.) and shall not exceed a maximum noise level of 60 dBA L_{max} during the nighttime hours (10:01 p.m. to 7:00 a.m.)

Table 13 Exterior Noise Level Standards

Time Period	Maximum Noise Level
10:01 p.m. to 7:00 a.m.	60 dBA
7:01 a.m. to 10:00 p.m.	80 dBA
Source: City of Perris Municipal Code 7.34.040 and 7.34.050	

Section 7.34.060, Construction noise, states that it is unlawful for any person between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on a legal holiday, with the exception of Columbus Day and Washington's birthday, or on Sundays to erect, construct, demolish, excavate, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise. Construction activity shall not exceed 80 dBA in residential zones in the city.

The City of Perris does not have a quantified threshold for temporary construction vibration. Therefore, to determine impact significance, the Federal Transit Administration (FTA) criteria are used in this analysis. A vibration impact would occur if project vibration levels exceed 0.20 inches/second (in/sec) peak particle velocity (PPV) at the façade of a non-engineered structure (e.g., wood-frame residential) at the nearby sensitive residential uses.

Would the project:

a) 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?

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

The noise produced at each construction phase is determined by combining the Leq contributions from the three loudest pieces of equipment used at a given time, while accounting for the ongoing time-variations of noise emissions (commonly referred to as the usage factor). Heavy equipment, such as a dozer or a loader, can

4. Environmental Analysis

have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on what specific activity is being performed at any given moment.

Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and diminishes at a rate of 6 dBA per doubling of distance (conservatively disregarding other attenuation effects from air absorption, ground effects, and shielding effects provided by intervening structures or existing solid walls), the average noise levels at noise-sensitive receptors could vary considerably, because mobile construction equipment would move around the site (site of each development phase) with different equipment mixes, loads, and power requirements.

The proposed project would construct a new two-story classroom building with exterior improvements on the western area of the campus. The new classroom building would contain 10 new classrooms and 2 labs, restrooms, a workroom, and mechanical and storage rooms. The addition of 10 classrooms and 2 labs on the campus would increase the student capacity by a maximum of 324 students.

The expected construction equipment mix was estimated and categorized by construction activity using the Federal Highway Administration Roadway Construction Noise Model (RCNM). Average noise levels from project-related construction activities are calculated by modeling the three loudest pieces of equipment per activity phase. Equipment for grading and site preparation is modeled at spatially averaged distances (i.e., from the acoustical center of the general construction site to the property line of the nearest receptors) because the area around the center of construction activities best represents the potential average construction-related noise levels at the various sensitive receptors for mobile equipment. Similarly, construction noise from demolition is modeled from the center of the project site. Building construction and architectural coating are measured from the edge of the proposed buildings to the nearest sensitive receptors. Additionally, paving is measured from the edge of the nearest paving areas to the nearest sensitive receptors. Results are summarized in Table 14, *Project Related Construction Noise Levels (dBA)*, at the nearest receptors. Construction noise levels near existing residences to the north, west, east and south were modeled between 52 dBA and 68 dBA Leq at the nearest noise sensitive residences to the north, south, east, and west to the project site. Construction noise levels would not exceed the City of Perris construction noise standard of 80 dBA Lmax at residential uses near the project site and would occur during the limited hours of 7:00 am to 7:00 p.m. per City Code Section 7.34.06. Therefore, construction noise impacts would be less than significant.

Table 14 Project-Related Construction Noise Levels

Construction Activity Phase	Noise Levels in dBA L_{eq}				
	RCNM Reference Noise Level	Residential Receptor to North	Residential Receptor to East	Recreational Receptor to South	Residential Receptor to West
Distance in feet	50	420	660	700	360
Demolition	85	67	63	62	68
Site Preparation	85	67	63	62	68
Rough Grading	85	67	63	62	68
Distance in feet	50	375	630	645	330
Building Construction	80	62	58	58	64
Architectural Coating	74	56	52	52	58
Distance in feet	50	320	550	635	290
Paving	80	64	59	58	65
Exceeds FTA's 80 dBA L_{eq} Threshold?		No	No	No	No

Source: FHWA's RCNM software. Distance measurements were taken using Google Earth (2024) from the acoustical center of the project site.
Notes: dBA L_{eq} = Energy-Average (L_{eq}) Sound Levels.
See Appendix C for construction noise calculations.

On-Campus Receptors

Students would remain on site during demolition, site preparation, and building construction. Construction activities could occur within 85 feet of existing classroom buildings. As shown in Table 14, construction noise levels would range between 74 dBA and 85 dBA Leq at 50 feet per the RCNM Reference Noise Level and would propagate to 69 dBA and 80 dBA Leq at 85 feet. Typical exterior-to-interior noise attenuation with windows and doors closed is 25 dBA. This would result in interior noise levels of approximately 44 dBA to 55 dBA Leq. Speech interference is considered intolerable when background noise levels exceed 60 dBA. Therefore, average construction noise levels are not expected to exceed 60 dBA Leq within adjacent classrooms based on typical exterior-to-interior noise attenuation. Construction would occur throughout the project site and would be further than 85 feet at times, which would reduce interior noise levels. In addition, to avoid classroom disruption, some work would be done during instructional breaks when students are off campus. Additionally, construction of the proposed project would occur during the limited hours of 7:00 am to 7:00 p.m. per City Code Section 7.34.06. Therefore, on-campus construction noise impacts would be less than significant.

Operational Noise

The proposed project's primary onsite operational noise sources would be new classroom building rooftop heating, ventilation, and air conditioning (HVAC) units. The proposed project could include eight rooftop HVAC units.

The proposed new classroom building rooftop HVAC units would generate noise levels of up to 82 dBA (Carrier 2024). All proposed HVAC unit noise levels would be less than 58 dBA Lmax at 50 feet. Assuming continuous operation, rooftop HVAC units would result in a combined noise level of 50 dBA Lmax at the nearest noise sensitive receptor (residence to the west at 250 feet from the center of rooftop HVAC units). The proposed new classroom building would include rooftop parapets that would break line of sight from source to receiver and reduce HVAC noise levels at nearby receptors. Operational noise from the HVAC equipment would not exceed daytime and nighttime noise standards of 60 dBA and 80 dBA Lmax, respectively, per City Code Section 7.34.050. Furthermore, operational noise from HVAC equipment would not substantially increase ambient noise levels at nearby residences. Thus, noise impacts from mechanical equipment would be less than significant.

Operational Off-Site Traffic Noise

A project will normally have a significant effect on the environment related to traffic noise if it substantially increases 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 dBA to 3 dBA under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an outdoor environment. Noise levels above 65 dBA CNEL are normally unacceptable at sensitive receptor locations such as residences, and noise environments in these areas would be considered degraded. Based on this, a significant impact would occur if the following traffic noise increases occur relative to the existing noise environment:

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

Based on traffic noise modeling, a significant traffic noise impact occurs when the thresholds above are exceeded under cumulative conditions (with project) and the contribution of the project to future traffic is calculated to be greater than 5 dBA CNEL for Murrieta Road, Mildred Street, and Wilson Avenue.

With the additional classroom capacity, student enrollment would also increase by a maximum of 324 students. Traffic volume data for the new trips associated with the project are provided by Garland Associates (2024). The proposed project is expected to generate a net increase of 243 vehicle trips during the morning peak hour (131 inbound and 112 outbound), 146 trips during the afternoon peak hour (67 inbound and 79 outbound), and 740 trips per day. The data provided by the traffic engineer presents the street and locations with scenarios for existing, existing with project conditions, Future 2027, and Future 2027 with project conditions. With the project trip additions, noise levels along the segments of Murrieta Road, Mildred Street, and Wilson Avenue would increase between less than 1 dBA and 1 dBA. Table 15, *Project-Related School Increases in Traffic Noise, dBA CNEL at 50 Feet*, shows the addition of proposed project trips would not result in a 5 dBA increase over existing conditions. Therefore, traffic noise impacts would be less than significant.

Table 15 Project-Related School Increases in Traffic Noise, dBA CNEL at 50 Feet

Roadway	Segment		Traffic Noise Increase Existing CNEL at 50 Feet					
	From	To	Existing No Project	Existing with Project	Existing Increase	Future (2027) No Project	Future (2027) with Project	Future (2027) Increase
Murrieta Road	the North	Mildred St	58	59	1	59	59	<1
Murrieta Road	Mildred St	School Dwy	58	58	<1	58	59	1
Murrieta Road	School Dwy	the South	58	58	<1	58	59	1
Mildred Street	Wilson Ave	School Dwy	55	55	<1	55	55	<1
Mildred Street	School Dwy	Murrieta Rd	55	56	1	56	56	<1
Wilson Avenue	Mildred St	the South	55	55	<1	55	55	<1

Source: Garland Associates (2024).
See Appendix C for calculations.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Potential vibration impacts associated with development projects are usually related to the use of heavy construction equipment during the demolition phase of construction. Construction can generate varying degrees of ground vibration depending on the construction procedures and equipment. Construction equipment generates vibration that spreads through the ground and diminishes 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.

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 residential structures) (FTA 2018). Table 16, *Vibration Impact Levels for Typical Construction Equipment*, shows typical construction equipment vibration levels and reference vibration levels at a distance of 25 feet. The nearest construction activity associated with project construction activities would occur 75 feet from on-campus buildings to the east of the project site. At 75 feet, construction vibration levels would be up to 0.040 in/sec PPV or less, as shown in Table 16. The closest residential buildings to the project site are 340 feet north and west of the project site. At 340 feet, construction vibration levels would be up to 0.004 in/sec PPV or less.

4. Environmental Analysis

Table 16 Vibration Impact Levels for Typical Construction Equipment

Equipment	in/sec PPV				
	Reference Levels at 25 Feet	Residential Receptor to North at 340 feet[1]	Residential Receptor to East at 425 feet[1]	Residential Receptor to West at 340 feet[1]	On-Campus Receptors to West at 75 feet[1]
Vibratory Roller	0.21	0.004	0.003	0.004	0.040
Hoe Ram	0.089	0.002	0.001	0.002	0.017
Large Bulldozer	0.089	0.002	0.001	0.002	0.017
Loaded Trucks	0.076	0.002	0.001	0.002	0.015
Jackhammer	0.035	0.001	0.000	0.001	0.007
Small Bulldozer	0.003	0.000	0.000	0.000	0.001

Source: FTA 2018.
Note: See Appendix C for vibration calculations.
1 As measured from the edge of construction site using Google Earth Pro.

The City of Perris does not have an established threshold for assessing construction vibration impacts. The FTA maximum acceptable vibration standard of 0.2 in/sec PPV for nonengineered timber and masonry buildings is applied for assessing vibration impacts from project construction-related activities. The nearest structure to the site's construction activities, on-campus buildings to the east, is approximately 75 feet away from the proposed construction. At this distance, construction vibration from a vibratory roller would attenuate to 0.040 in/sec PPV or less. Proposed construction activities would not exceed the FTA vibration standard of 0.2 in/sec PPV at the building façade. Therefore, impacts from construction vibration would be less than significant.

Operational Vibration

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

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?

Less Than Significant Impact. The project site is located approximately 1.7 miles north of Perris Valley Airport and approximately 5 miles south of March Air Reserve Base/Inland Port Airport. Based on Map PV-3 of the Riverside County Airport Land Use Compatibility Plan Policy Document (2012), the project site is approximately a mile outside of the 60 dBA CNEL noise contour of Perris Valley Airport. According to Figure 4-2 of the Final Air Installations Compatible Use Zones Study March Air Reserve Base (2018), the project site is approximately 1.3 miles outside of the 60 dBA CNEL noise contour for the March Air Reserve Base. Implementation of the proposed project would not result in increased exposure of people working at or visiting the project site to aircraft noise. Therefore, impacts from aircraft noise would be less than significant.

4.14 POPULATION AND HOUSING

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The project site is in an urbanized area of the city. The proposed project does not include the construction of any new homes or businesses or changes to the existing land uses on-site. The proposed project would include the construction of a new two-story classroom building that would contain 10 new classrooms, an art classroom, a science classroom, restrooms, a work room, mechanical and storage rooms, and other utility rooms. The addition of 10 classrooms, art room, and science room on the campus would increase student capacity by a maximum of 324 students, or approximately 45 percent of the existing conditions (CDE 2024). However, the proposed project is expected to continue serving students who are already living in the area. Due to the estimated increase in student enrollment as a result of the proposed project, impacts would be less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project is on an established school campus. Development of the proposed project would not involve the removal or relocation of any housing and would not displace any people or require the construction of any replacement housing. Therefore, no impact would occur.

4. Environmental Analysis

4.15 PUBLIC SERVICES

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	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:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?				X

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less Than Significant Impact. Fire protection and emergency services are provided by the Riverside County Fire Department (RCFD). The City of Perris has 27 firefighters assigned to two fire stations, RCFD 90 and RCFD 101, with daily staffing of one engine, one truck company, and one squad. RCFD Station 101 (105 S F Street) is approximately 1.7 miles southwest of the project site, and RCFD Station 90 (333 Placentia Avenue) is approximately 2.4 miles north of the project site. Project implementation would result in an increase in student enrollment. However, considering the existing resources available in and near the city and that proposed project would be consistent with existing uses, impacts on fire protection and emergency services are not expected. Furthermore, upgrades to existing buildings and construction of new buildings would be subject to current fire code and RCFD requirements for fire sprinkler systems, fire alarm systems, fire flow, and equipment and firefighter access. Compliance with fire code standards would be ensured through the plan check process and would minimize hazards to life and property in the event of a fire.

The proposed project would also be subject to DSA review to ensure that plans, specifications, and construction comply with access, fire, and life safety design standards established by DSA and California's building codes (CCR Title 24). DSA would review fire department and emergency access roadways and school drop-off and pick-up areas to ensure adequate emergency access is maintained. Fire alarm systems, elevator systems, and building occupancy would also be reviewed for compliance with current safety standards and regulations.

Compliance with fire code standards would be ensured through the plan check process and would minimize hazards to life and property in the event of a fire. The proposed project would not require the provision of new or physically altered fire protection facilities to maintain acceptable service ratios, response times, or other performance objectives such that environmental impacts would result. Impacts would be less than significant.

b) Police protection?

Less Than Significant Impact. Police protection services are provided by Riverside County Sheriff. The Perris Police Station is at 137 N. Perris Boulevard, approximately 1.6 miles southwest of the project site. This station also serves the unincorporated communities of Glen Valley, Mead Valley, Wood Crest, Romoland, and Nuevo. Project implementation would result in an increase in student enrollment. However, considering the existing resources available in and near the city and that proposed project would be consistent with existing uses, project impacts on police protection services are not expected. Additionally, active construction areas would be fenced and would remain secured outside of work hours. Any increase in police demands would be temporary and would not require construction of new or expanded police facilities. Thus, the proposed project would not adversely affect the police department's ability to provide adequate service and would not require new or expanded police facilities that could result in adverse environmental impacts. Therefore, impacts would be less than significant.

c) Schools?

Less Than Significant Impact. The project site is developed on a school campus. The proposed project would construct a two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen. The proposed project would accommodate an additional 324 students; however, the proposed project would not induce population growth. The proposed project would serve the existing community, and no additional school demands would be created. Once constructed, the new school facilities would continue to serve the existing population. The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities. Therefore, the proposed project would have a less than significant impact.

d) Parks?

Less Than Significant Impact. Park space demand is typically caused by uses that generate population and/or employment growth. The proposed project would construct a two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen.. The proposed project would accommodate an additional 324 students; however, the proposed project would not induce population growth. Additionally, the City of Perris has 22 parks available to community members. There are three parks within a one-mile radius of the campus; Patriot Park, Bob Long Park, and Skydive Baseball Park. Therefore, the proposed project would not increase the overall demand for parks. Impacts would be less than significant.

e) Other public facilities?

No Impact. The proposed project would not result in impacts associated with the provision of other new or physically altered public facilities (e.g., libraries, hospitals, childcare, teen or senior centers). Physical impacts to public services are usually associated with population in-migration and growth, which increase the demand for public services and facilities. The proposed project would not result in population growth. No impact would occur.

4.16 RECREATION

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	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?			X	
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?			X	

Would the project:

a) 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?

Less than Significant Impact. Typically, the demand for parks is created by the development of new housing and/or actions that generate additional population. There are 22 parks located throughout Perris (Perris 2006). The closest park to the campus is Patriot Park at 525 Murietta Road and approximately 0.2 mile southeast of the campus. There are also a number of recreation facilities located throughout the city. The proposed project would alter existing recreational facilities on the campus, which would include the relocation of three basketball courts adjacent to the new classroom building. The proposed project would increase the student capacity by a maximum of 324 students. As students will be drawn from the existing pool of students in the area, increased demand for off-site recreational resources, parks, or other facilities within the city is not anticipated as a result of the proposed project's implementation. Therefore, a less than significant impact is expected.

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?

Less Than Significant Impact. No additional recreational facilities would be constructed as part of the proposed project. Three existing basketball courts will be relocated adjacent to the classroom building, with the relocation involving only the repainting of the courts. Therefore, less than significant impact is expected.

4. Environmental Analysis

4.17 TRANSPORTATION

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?				X

The analysis in this section is based on the following study, which is in Appendix D of this Initial Study.

- *Traffic/Transportation Impact Analysis*, Garland Associates, October, 2024

Existing Street Network

The streets that provide access to the proposed project area include Mildred Street, Murrieta Road, and Wilson Avenue.

Mildred Street

Mildred Street is a two-lane east-west street that abuts the north side of the school campus. Parking is provided on the south side of the street except for the area that abuts the west end of the school site, which has "No Stopping Any Time" restrictions. Parking can be accommodated on a shoulder on the north side of the street across from the school, and parking is provided on both sides of the street west of the school site. Sidewalks are on the south side of the street along the school frontage and on both sides of the street west of the school site. There are no bike lanes on Mildred Street. The speed limit on Mildred Street is 25 miles per hour (mph).

There are three driveways on the south side of Mildred Street that provide access to school. The west driveway is the entry driveway for a student drop-off/pick-up area and the middle driveway is the exit from this area. The east driveway is the entry driveway to the school's parking lot and a second drop-off/pick-up area.

Murrieta Road

Murrieta Road is a two lane north-south street that abuts the east side of the school campus. It has sidewalks on the west side of the street and no sidewalks on the east side. Parking is prohibited on both sides of the street and there are bike lanes along both sides of the street. There is a driveway on the west side of Murrieta Road south of Mildred Street that provides access to the school's parking lot and serves as the exit from the drop-off/pick-up area. The speed limit on Murrieta Road is 25 mph.

Wilson Avenue

Wilson Avenue is a two lane north-south street located approximately 650 feet west of the school site. It has sidewalks and parking on both sides of the street and there are no bike lanes. The speed limit on Wilson Avenue is 25 mph.

Existing Bus Transit Service

Riverside Transit Agency (RTA) operates one bus route in the vicinity of the school site. Route 30 runs along Redlands Avenue and Nuevo Road. Redlands Avenue is approximately 0.375 miles west of the school site and Nuevo Road is approximately 0.375 miles north of the school site. There are no bus routes adjacent to the school site.

Existing Traffic Control and Crosswalks

The existing traffic control devices at the study area intersections are shown in Table 17, *Existing Traffic Control Devices and Crosswalks*.

Table 17 Existing Traffic Control Devices and Crosswalks

Intersection	Traffic Control	Crosswalks
Mildred Street / Murrieta Road	3-Way Stop Signs	On North, South, & West Legs
Mildred Street / Hollowood Court	3-Way Stop Signs	On North & East Legs
Mildred Street / Wilson Avenue	None	None

Source: Garland Associates 2024.

Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

No Impact. The Circulation Element of the City of Perris General Plan includes various goals, policies, and implementation measures that outline the overall objective of establishing a comprehensive multi-modal transportation system that is safe, achievable, efficient, environmentally and financially sound, accessible, and coordinated with the Land Use Element. The goals in the Circulation Element that are applicable to the proposed school project are as follows.

- **Goal I:** Provide a comprehensive transportation system that will serve projected future travel demand, minimize congestion, achieve the shortest feasible travel times and distances, and address future growth and development in the City.

- **Goal II:** Provide a well-planned, designed, constructed, and maintained street and highway system that facilitates the movement of vehicles and provides safe and convenient access to surrounding developments.

- **Goal IV:** Provide safe and convenient pedestrian access and non-motorized facilities between residential neighborhoods, parks, open space, and schools that service those neighborhoods.
- **Goal VII:** Provide a transportation system that maintains a high level of environmental quality.
- **Goal VIII:** Achieve enhanced traffic flow, reduced travel delay, reduced reliance on single-occupant vehicles, and improved safety along the City and State roadway system.

The proposed project includes the construction of a new two-story classroom building that would contain 10 classrooms and two labs. It would accommodate up to 324 additional students at the school. The proposed project would generate a net increase of 243 vehicle trips during the morning peak hour (131 inbound and 112 outbound), 146 trips during the afternoon peak hour (67 inbound and 79 outbound), and 740 trips per day. The anticipated traffic volumes do not necessarily introduce new traffic to the overall roadway network but instead represent the traffic that would be redirected to this school site because the number of students attending school in the district is a function of the school-age population and the demand for educational facilities. Most of the school-related traffic would be traveling on the roadway network regardless of the status of the proposed project. Bike lanes are provided on Murrieta Road. In addition, bike racks are provided on the school campus. These bike facilities would not be adversely impacted by the increased number of students at the school. With regard to public transit, it is not anticipated that ridership on the bus routes cited previously would be noticeably affected by the school expansion project.

The proposed project is consistent with the goals in the Circulation Element and would not adversely affect the performance of any roadway, transit, or non-motorized (pedestrian and bicycle) transportation facilities. Based on the traffic analysis and a review of the Circulation Element of the City's General Plan, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, no impact would occur.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Less Than Significant Impact. Vehicle delays and levels of service (LOS) have historically been used as the basis for determining the significance of traffic impacts as standard practice in California Environmental Quality Act (CEQA) documents. In 2013, SB 743 was signed into law, eliminating auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts under CEQA. Pursuant to SB 743, the California Natural Resources Agency adopted revisions to the CEQA Guidelines in 2018; CEQA Guidelines Section 15064.3 describes how transportation impacts are to be analyzed after SB 743. Under the Guidelines, metrics related to "vehicle miles traveled" (VMT) are required to evaluate the significance of transportation impacts under CEQA for development projects, land use plans, and transportation infrastructure projects.

The City of Perris adopted a document titled "Transportation Impact Analysis Guidelines for CEQA," which includes screening criteria that can be used to identify when a proposed land use development project is anticipated to result in a less than significant VMT impact. The guidelines state that land use types that are considered local serving are exempt from a VMT analysis. Land uses in the local-serving category would have a less than significant transportation impact and can be screened from requiring a detailed VMT analysis.

Schools are considered a local-serving land use, so this school expansion project would have a less than significant VMT impact.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. The proposed project would not provide any on- or off-site access or circulation features that would create or increase any design hazards or incompatible uses. Access to the school site would continue to be provided by the existing driveways on the south side of Mildred Street and on the west side of Murrieta Road. There would be no roadway improvements in the public right-of-way, and all improvements within the school site would be consistent with the criteria of the California Division of the State Architect.

The increased levels of traffic, the increased number of pedestrians, and the increased number of vehicular turning movements at the driveways and nearby intersections would result in an increased number of traffic conflicts and a corresponding increase in the probability of an accident occurring. These impacts would not be significant, however, because the streets, intersections, and driveways are designed to accommodate the anticipated levels of vehicular and pedestrian activity. These streets and intersections have historically accommodated school-related traffic on a daily basis for the existing school. The proposed project would add more vehicles to the roadway network, but the additional vehicles would be compatible with the design and use of the affected streets. The proposed project would not result in any major safety or operational issues relative to access and circulation.

Because the existing street network could readily accommodate the anticipated increase in vehicular, pedestrian, and bicycle activity, the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses, and impacts are less than significant.

d) Result in inadequate emergency access?

No Impact. The existing and proposed access and circulation features at the existing school, including the driveways, on-site roadways, parking lots, and fire lanes, would accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. These facilities would provide access to the school grounds, the buildings, and all other areas of the project site, including the playfields and hard courts. The design and any modifications to the access features are subject to and must satisfy the District's requirements and would be subject to approval by the Fire Department and the California Division of the State Architect. The proposed project would not, therefore, result in inadequate emergency access, and no impact would occur.

4. Environmental Analysis

4.18 TRIBAL CULTURAL RESOURCES

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES.				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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				X
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.		X		

Would the project:

a) **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:**

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**

No Impact. The project site is not currently listed in the California Register of Historical Resource or in a local register of historical resources (NPS 2023; OHP 2023). Public Resources Code Section 5020.1(k) defines local register of historical resources as a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution. There is no local ordinance or resolution that identifies the project site as a historical resource. The proposed project would not result in potential impacts to sensitive tribal resources. No impact would occur.

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 section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource**

Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant Impact With Mitigation Incorporated. Assembly Bill 52 requires meaningful consultation with California Native American tribes on potential impacts to tribal cultural resources, as defined in Public Resources Code Section 21074. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources.

As part of the AB 52 process, Native American tribes must submit a written request to the District (lead agency) to be notified of projects within their traditionally and culturally affiliated area. The District must then provide written, formal notification to those tribes, and the tribe must respond to the lead agency within 30 days of receiving this notification if they want to engage in consultation on the project. When these steps are completed, the District must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either 1): the parties agree to mitigation measures to avoid a significant effect on a tribal cultural resource; 2) a party, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached; or 3) a tribe does not engage in the consultation process or provide comments.

The District invited California Native American tribes that are traditionally and culturally affiliated with the project area to consult on the proposed project via email. 13 tribes were contacted, consistent with AB 52. The 13 tribes contacted were Agua Caliente Band of Cahuilla Indians, Augustine Band of Cahuilla Indians, Cabazon Band of Cahuilla Indians, Morongo Band of Mission Indians, Pala Band of Mission Indians, Pechanga Band of Indians, Quechan Tribe of the Fort Yuma Reservation, Ramona Band of Cahuilla, Rincon Band of Luiseno Indians, Santa Rosa Band of Cahuilla Indians, Soboba Band of Luiseno Indians and Torres-Martinez Desert Cahuilla Indians. The letters were sent on December 24, 2024. Additionally, the NAHC Sacred Lands File search came back positive for the Pechanga Band of Indians. Six tribes have contacted the District. The District provided additional project information to the Agua Caliente Band of Cahuilla Indians, Pechanga Band of Indians, and the Rincon Band of Luiseno Indians. The District met with representatives of the Rincon Band of Luiseno Indians on January 28, 2025. The tribe requested additional information for the proposed project.

The Augustine Band of Cahuilla Indians, Quechan Tribe of the Fort Yuma Reservation, and Santa Rosa Band of Cahuilla Indians did not wish to consult on the project and/or deferred any comments to tribes that are familiar with the project area. No additional project information was requested by any other tribes.

Public Resources Code Section 5024.1(c) indicates that a resource may be listed as a historical resource in the California Register if it meets any of the four National Register of Historic Places criteria. This discussion is also provided in Section 3.5, *Cultural Resources*, of this IS/MND. The project site is fully developed with no visible native ground surface exposed. The proposed project would disturb 1.3 acres of the 8.6 acre project site. Because the project site has been developed, the utilities trenching for the proposed project would not occur in native soils that may contain tribal cultural resources. Although the likelihood

4. Environmental Analysis

of discovering tribal cultural resources is minimal, the potential for discovering previously unidentified subsurface tribal cultural resources exists. Therefore, mitigation has been incorporated to reduce impacts on tribal cultural resources to a less than significant level.

Mitigation Measures

TCR-1 If tribal cultural resources are inadvertently discovered during ground disturbing activities for this project. The following procedures will be carried out for treatment and disposition of the discoveries:

- Upon discovery of any tribal cultural resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed.
- All tribal cultural resources unearthed by project activities shall be evaluated by the qualified archaeologist and/or applicable tribal monitor. If the resources are Native American in origin, the applicable tribe will retain the resource in the form and/or manner the tribe deems appropriate, for educational, cultural and/or historic purposes.
- Work may continue on other parts of the project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures or appropriate mitigation must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources.
- Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

4.19 UTILITIES AND SERVICE SYSTEMS

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
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?			X	
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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact.

Water Supply Facilities

The Eastern Municipal Water District provides water to the City of Perris and to the project site. Local sources of the water provided by EMWD include groundwater, desalinated groundwater, and recycled water. Outside water sources come from the Metropolitan Water District of Southern California. According to EMWD's Urban Water Management Plan, the total water capacity for 2020, the last year reported, was approximately 124,314 acre-feet per year (afy) (EMWD 2021).

The proposed project would construct a two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen. The proposed project would increase student capacity by a maximum of 324 students, a total increase in student enrollment of 45 percent. Water is currently provided to the campus by existing EMWD water mains. Potable water would be provided to the proposed project through connections to the existing water mains. The proposed water system improvements would be designed and constructed in accordance with the California Building Code and CALGreen requirements, such as CALGreen Division 5.3, Water Efficiency and Conservation, including Sections 5.303, Indoor Water Use,

4. Environmental Analysis

and 5.304, Outdoor Water Use. Additionally, though more students would be located on campus because of the proposed project, those students would be from an existing pool of students from other schools within the District. As such, water consumption on the Sky View ES campus would increase but water consumption in the EMWD would not increase. The proposed project would not require the relocation or construction of new or expanded water facilities. Therefore, impacts would be less than significant.

Wastewater Treatment Facilities

The EMWD also provides wastewater collection and treatment services to the project site. The project site is currently developed and served by existing wastewater facilities. The proposed project includes construction of a two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen. According to the EMWD's Urban Water Management Plan, the entire EMWD has a wastewater and treatment capacity of 86,300 afy, and the Perris Valley facility that serves the project site, has a capacity of 26,900 afy. Additionally, the EMWD collected 53,073 afy of wastewater in 2020, and the Perris Valley facility collected 17,282 afy in 2020 (EMWD 2021). As stated previously, incoming students would be from an existing pool of students from other schools in the District. As such, the proposed project would increase the amount of wastewater from the project site, but not increase the amount of wastewater being produced within the EMWD. The proposed project would not require the relocation or construction of new or expanded wastewater facilities. Therefore, impacts would be less than significant.

Stormwater Drainage Facilities

The proposed project would result in a slight increase in impervious surfaces compared to existing conditions with the construction of a two-story classroom building with exterior improvements and the expansion of kitchen facilities to an existing kitchen. The increase in impervious surfaces due to the proposed project would be minor. The stormwater from the proposed project would be conveyed to existing stormwater drains on campus or to the neighboring storm drain system along roadways. The proposed project would not significantly increase or change the stormwater volume, rate, or pattern beyond connecting to existing stormwater system. Impacts would be less than significant.

Electrical Facilities

Southern California Edison (SCE) provides electricity to the project site. The proposed project would connect to existing facilities. The proposed project would include the construction of a two-story classroom building with exterior improvements and construct the expansion of kitchen facilities to an existing kitchen. The proposed project would increase student capacity by a maximum of 324 students, a total increase in student enrollment of 45 percent. Although the proposed project would increase student capacity, those students would be from an existing pool of students from other schools within the District. As such, electricity consumption on the Sky View ES campus would increase but electricity consumption within the SCE service area would not increase. The proposed project would not require the relocation or construction of new or expanded electrical facilities. Therefore, impacts would be less than significant.

Natural Gas Facilities

Southern California Gas Company (SoCalGas) provides natural gas service to the Sky View ES campus. As a public utility, SoCalGas is under the auspices of the California Public Utilities Commission and federal regulatory agencies. Development of the proposed project would comply with regulations and standards pertaining to natural gas. The expansion of the kitchen facilities would require the use of natural gas. The expanded kitchen facilities would connect to the existing natural gas lines already developed. As such, the project would not require the construction of new or expanded facilities. Therefore, the proposed project would result in a less than significant impact.

Telecommunication Facilities

The proposed project would not require additional telecommunications facilities demand. The proposed project would not require off-site construction or relocation of utilities, and therefore no impacts would occur.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact. As stated in 5.19(a), water provided to the District via the EMWD is sourced locally from groundwater, desalinated groundwater, and recycled water, and outside water sources come from the Metropolitan Water District of Southern California. According to EMWD's Urban Water Management Plan, the total water capacity for 2020, the last year reported, was approximately 124,314 afy (EMWD 2021). The water usage from all sources in the same timeframe is estimated to be approximately 84,673 afy with an excess amount of approximately 39,641 afy.

The proposed project's water demand would consist of indoor and outdoor water demands. Indoor water demand would be approximately 1.84 afy and outdoor water demand would be approximately 2.71 afy for a total water demand of 4.55 afy from both sources. The proposed project's demand would be less than 1 percent of the EMWD's excess amount. Furthermore, development of the proposed project would be required to comply with the provisions of CALGreen, including Sections 5.303, Indoor Water Use, and 5.304, Outdoor Water Use. As such, the EMWD contains adequate water supplies to meet the water demands of the proposed project during normal, dry and multiple dry years. Impacts would be less than significant.

c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. Wastewater generated at the campus is conveyed to the Perris Valley facility, which has a capacity of 26,900 afy. The Perris Valley facility collected 17,282 afy in 2020, giving it an excess capacity of approximately 9,618 afy (EMWD 2021).

The net increase in wastewater generation for the proposed project is assumed to be 95 percent of the increase in indoor water use. The proposed project would result in a net increase of indoor water demand of approximately 1.84 afy. Therefore, the proposed project would generate an increase of approximately 1.75 afy in wastewater. The amount of wastewater that would be generated is less than 1 percent of EMWD's Perris

Valley facility wastewater treatment plant's total remaining treatment capacity. Therefore, project development would not require the construction of new or expanded wastewater treatment facilities. Impacts would be less than significant.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. During construction the proposed project would generate some demolition and waste debris from asphalt demolition, site preparation, grading, and building construction. . In accordance with CALGreen Section 5.408, Construction Waste Reduction, Disposal, and Recycling, at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations would be recycled and/or salvaged for reuse. Solid waste generated by the City of Perris is disposed of at the El Sobrante Landfill and the Badlands Sanitary Landfill. The El Sobrante Landfill has a remaining capacity of 38,873,835 tons,[5] and the Badlands Sanitary Landfill has a remaining capacity of 2,106,000 tons (CalRecycle 2024). The proposed project would increase the number of students on campus by a maximum of 324 students which would increase solid waste generation by approximately 26.82 tons per year (Appendix A). Both landfills, together and separately, would have sufficient capacity to facilitate the increase in waste generation and would be within the remaining capacity of area landfills. The proposed project would not adversely impact landfill capacity or impair attainment of solid waste reduction goals, and impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. The District complies with federal, State, and local statutes and regulations related to solid waste, such as the California Integrated Waste Management Act and local recycling and waste programs. The District and its construction contractor would comply with all applicable laws and regulations and make every effort to reuse and/or recycle the construction debris that would otherwise be taken to a landfill. CALGreen Section 5.408, Construction Waste Reduction, Disposal, and Recycling, requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. The proposed project would comply with all applicable federal, State, and local statutes and regulations related to solid waste disposal. Therefore, the impacts would be less than significant.

[5] A volume-to-weight conversion rate of 2,000 lbs/cubic yard (1 tons/cubic yard) for "Compacted - MSW Large Landfill with Best Management Practices" is used as per CalRecyle's 2016 Volume-to-Weight Conversion Factors, at https://www.epa.gov/sites/production/files/201604/documents/volume_to_weight_conversion_factors_memorandum_04192016_508fnl.pdf.

4.20 WILDFIRE

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
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?				X
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?				X
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?			X	

Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. State Responsibility Areas (SRA) are the areas in the state where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. The SRA forms one large area over 31 million acres to which the State Department of Forestry and Fire Protection (CAL FIRE) provides a basic level of wildland fire prevention and protection services (CALFIRE 2023).

Local responsibility areas (LRA) include incorporated cities, cultivated agriculture lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government. CAL FIRE uses an extension of the state responsibility area Fire Hazard Severity Zone model as the basis for evaluating fire hazard in local responsibility area. The local responsibility area hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area.

Would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The project site is not located in or near a state responsibility area (SRA) or on land classified as Very High Fire Hazard Severity Zone (FHSZ) (CAL FIRE 2023). The nearest FHSZ to the project site is approximately 1.5 miles west. The proposed project would not impair an adopted emergency evacuation or response plan within such an area. Therefore, no impact would occur.

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?

No Impact. The project site is not located in or near an SRA or lands classified as very high FHSZ. The proposed project is in an urbanized area and is generally flat without significant topography, and there are no steep slopes where high winds can exacerbate wildfire risks. Project development would not place people or structures at risk from wildfire. No wildlands exist within the immediate vicinity of the campus. As such, the proposed project would not exacerbate wildfire risks or expose the proposed project's occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire within such an area. Therefore, no impact would occur.

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. The proposed project does not require the installation or maintenance of associated infrastructure, such as roads, that may exacerbate fire risk. The proposed project would not result in temporary or ongoing impacts to the environment. Therefore, no impacts would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. The project site is generally flat without significant topography with no steep slopes and is not susceptible to landslides. Additionally, implementation of the proposed project would not alter the existing drainage patterns or substantially increase the amount of runoff. Thus, implementation of the proposed project would not result in result of runoff, post-fire slope instability, or drainage changes. Therefore, impacts would be less than significant.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact With Mitigation Incorporated. As discussed in this Initial Study, the proposed project would not degrade the quality of the environment with implementation of identified standard permit conditions and mitigation measures. As discussed in Section 4.5, *Cultural Resources* and Section 4.18, *Tribal Cultural Resources*, with implementation of Mitigation Measure CUL-1, the proposed project would result in a less-than-significant impact on archaeological and historic resources.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant Impact With Mitigation Incorporated. As discussed previously in this Initial Study, the proposed project would have no impact or a less-than-significant impact to aesthetics, agriculture and forestry resources, biological resources, energy, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire. As discussed in Sections 4.3, *Air Quality*;

4. Environmental Analysis

4.5, *Cultural Resources*; 4.7, *Geology and Soils*; and 4.18, *Tribal Cultural Resources*, the project would not result in significant impacts to those resources with the implementation of identified and mitigation measures. For this reason, the project would not result in significant cumulative impacts to those resources. Therefore, all impacts are individually limited and would not result in any cumulatively significant impact.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact With Mitigation Incorporated. As discussed in the previous analyses, the proposed project would not result in significant direct or indirect adverse impacts or result in substantial adverse effects on human beings. Impacts would be less than significant with the implementation of the proposed mitigation measures.

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Appendix A Air Quality and Greenhouse Gas Emissions Background and Modeling Data

Appendix

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Air Quality and Greenhouse Gas Background and Modeling Data

AIR QUALITY

Air Quality Regulatory Setting

The project has the potential to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, it falls under the ambient air quality standards promulgated at the local, state, and federal levels. The project Site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast Air Quality Management District (South Coast AQMD). However, South Coast AQMD reports to California Air Resources board (CARB), and all criteria emissions are also governed by the California and national Ambient Air Quality Standards (AAQS). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the project are summarized below.

AMBIENT AIR QUALITY STANDARDS

The Clean Air Act (CAA) 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 CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), 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, based on even greater health and welfare concerns.

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

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 1, *Ambient Air Quality Standards for Criteria Pollutants*, these pollutants include 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 1 Ambient Air Quality Standards for Criteria 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	9 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	
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.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
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; US EPA 2024a.

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 February 7, 2024, the national annual $PM_{2.5}$ primary standard was lowered from 12.0 µg/m^3 to 9.0 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, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources and include CO, VOC, NO_2, SO_X, PM_{10}, $PM_{2.5}$, and Pb. 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 oxides of nitrogen (NO_X) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and NO_2 are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

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

Volatile Organic Compounds (VOC) are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (South Coast AQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O_3, South Coast AQMD has established a significance threshold (South Coast AQMD 2023). The health effects for ozone are described later in this section.

Nitrogen Oxides (NO_X) 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; US EPA 2024d). On February 21, 2019, CARB's Board approved the separation of the area that runs along the State Route 60 corridor through portions of Riverside, San Bernardino, and Los Angeles counties from the remainder of the SoCAB for state nonattainment designation purposes. The Board designated this corridor as nonattainment.[1] The remainder of the SoCAB is designated in attainment (maintenance) under the National AAQS and attainment under the California AAQS (CARB 2024a).

Sulfur Dioxide (SO_2) 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

1 CARB is proposing to redesignate SR-60 Near-Road Portion of San Bernardino, Riverside, and Los Angeles Counties in the SoCAB as attainment for NO_2 at the February 24, 2022 Board Hearing (CARB 2023d).

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 (South Coast AQMD 2005; US EPA 2024d). The SoCAB is designated as attainment under the California and National AAQS (CARB 2024a).

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤0.01 millimeter). Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤0.002.5 millimeter). 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) (South Coast AQMD 2005; South Coast AQMD 2022). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.0001 millimeter) have human health implications because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2022). 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 1999; CARB 2024d). Particulate matter can also cause environmental effects such as visibility impairment,[2] environmental damage,[3] and aesthetic damage[4] (South Coast AQMD 2005; South Coast AQMD 2022; US EPA 2024d). 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 2024a).[5]

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2 $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

3 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.

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

5 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}

Ozone (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 (South Coast AQMD 2005; US EPA 2024d). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2024a).

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005; South Coast AQMD 2022; USEPA 2024d). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[6] As a result of these violations, the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2024a). However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD 2012). CARB's State Implementation Plan (SIP) revision was submitted to the EPA for approval. Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the project.

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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.

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

Table 2, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

Table 2 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} and $PM_{2.5}$)	• Hospitalizations for worsened heart diseases • Emergency room visits for asthma • Premature death	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO_2)	• Aggravation of respiratory disease (e.g., asthma and emphysema) • Reduced lung function	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	• Behavioral and learning disabilities in children • Nervous system impairment	Contaminated soil

Source: CARB 2024b.

Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (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 to reduce exposure to these contaminants to protect the public health. 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." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. 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, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant 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 in the form of notices and public meetings.

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. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 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 lung.

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

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Community Risk

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3-butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

AIR QUALITY MANAGEMENT PLANNING

The South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

2022 AQMP

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, which serves as an update to the 2017 AQMP. On October 1, 2015, the EPA strengthened the National AAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb) (2015 Ozone National AAQS.). The SoCAB is currently classified as an "extreme" nonattainment for the 2015 Ozone National AAQS. Meeting the 2015 federal ozone standard requires reducing NO_x emissions, the key pollutant that creates ozone, by 67 percent more than is required by adopted rules and regulations in 2037. The only way to achieve the required NO_x reductions is through extensive use of zero emission (ZE) technologies across all stationary and mobile sources. South Coast AQMD's primary authority is over stationary sources which account for approximately 20 percent of NO_x emissions. The overwhelming majority of NO_x emissions are from heavy-duty trucks, ships and other State and federally regulated mobile sources that are mostly beyond the South Coast AQMD's control. The region will not meet the standard absent significant federal action. In addition to federal action, the 2022 AQMP requires substantial reliance on future deployment of advanced technologies to meet the standard. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available ZE and low-NO_x technologies and (2) developing new ZE and ultra-low NO_x technologies for use in cases where the technology is not currently available. South Coast AQMD is prioritizing distribution of incentive funding in Environmental Justice areas and seeking opportunities to focus benefits on the most disadvantaged communities (South Coast AQMD 2022).

Lead State Implementation Plan

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

South Coast AQMD PM2.5 Redesignation Request and Maintenance Plan

In 1997, the EPA adopted the 24-hour fine $PM_{2.5}$ standard of 65 micrograms per cubic meter ($\mu g/m^3$). In 2006, this standard was lowered to a more health-protective level of 35 $\mu g/m^3$. The SoCAB is designated nonattainment for both the 65 and 35 $\mu g/m^3$ 24-hour $PM_{2.5}$ standards (24-hour $PM_{2.5}$ standards). In 2020, monitored data demonstrated that the SoCAB attained both 24-hour $PM_{2.5}$ standards. The South Coast AQMD has developed the 2021 Redesignation Request and Maintenance Plan for the 1997 and 2006 24-hour $PM_{2.5}$ Standards demonstrating that the SoCAB has met the requirements to be redesignated to attainment for the 24-hour $PM_{2.5}$ standards (South Coast AQMD 2021b).

AB 617, Community Air Protection Program

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

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

Under AB 617, CARB is also required to prepare a statewide strategy to reduce TACs and criteria pollutants in impacted communities; provide a statewide clearinghouse for best available retrofit control technology; adopt new rules requiring the latest best available retrofit control technology for all criteria pollutants for which an area has not achieved attainment of California AAQS; and provide uniform, statewide reporting of emissions inventories. Air districts are required to adopt a community emissions reduction program to achieve reductions for the communities impacted by air pollution that CARB identifies.

Existing Conditions

CLIMATE/METEOROLOGY

South Coast Air Basin

The project site lies in the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain 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 (South Coast AQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The lowest average temperature recorded in Perris is reported at 41.2°F in December, and the highest average temperature is 95.3°F in August (USA.com 2024).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from October through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall averages 13.98 inches per year in the vicinity of the area (USA.com 2024).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. 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 (South Coast AQMD 2005).

Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by 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, both 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 affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (South Coast AQMD 2005).

Inversions

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

AREA DESIGNATIONS

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards. 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 CAAQS 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 a state 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 3, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

Table 3 Attainment Status of Criteria 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[1]
CO	Attainment	Attainment
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[2]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2024a.

1 The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal $PM_{2.5}$ standards. The 2021 $PM_{2.5}$ Redesignation Request and Maintenance Plan demonstrates that the South Coast meets the requirements of the CAA to allow US EPA to redesignate the SoCAB to attainment for the 65 µg/m^3 and 35 µg/m^3 24-hour $PM_{2.5}$ standards. CARB will submit the 2021 $PM_{2.5}$ Redesignation Request to the US EPA as a revision to the California SIP (CARB 2021).

2 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 for lead in the SoCAB are unclassified. However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD 2012). CARB's SIP revision was submitted to the EPA for approval.

EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the South Coast AQMD. The project site is located within Source Receptor Area (SRA) 24: Perris Valley. The air quality monitoring station closest to the project site is the Perris Monitoring Station, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.[7] Table 4, *Ambient Air Quality Monitoring Summary*, shows regular violations of the state and federal O_3 and state PM_{10} standards in the last five years.

Table 4 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations[1]				
	2019	2020	2021	2022	2023
Ozone (O_3)					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	28	34	25	n/a	n/a
State & Federal 8-hour ≥ 0.070 ppm (days exceed threshold)	66/64	77/74	60/55		
Max. 1-Hour Conc. (ppm)	0.118	0.125	0.106		
Max. 8-Hour Conc. (ppm)	0.096/0.095	0.106	0.092		
Nitrogen Dioxide (NO_2)					
State 1-Hour ≥ 0.18 ppm (days exceed threshold) Max. 1-Hour Conc. (ppb)	n/a	n/a	n/a	n/a	n/a
Coarse Particulates (PM_{10})					
State 24-Hour > 50 µg/m³ (days exceed threshold)	4	6	4	n/a	n/a
Federal 24-Hour > 150 µg/m³ (days exceed threshold)	0	0	0		
Max. 24-Hour Conc. (µg/m³)	92.1/97.0	87.6/92.3	73.5/77.5		
Fine Particulates ($PM_{2.5}$)					
Federal 24-Hour > 35 µg/m³ (days exceed threshold) Max. 24-Hour Conc. (µg/m³)	n/a	n/a	n/a	n/a	n/a

Source: CARB 2024c.
Notes: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter; n/a = Data not available; xx/xx = state/federal
[1] Data obtained from the Perris Monitoring Station.

MULTIPLE AIR TOXICS EXPOSURE STUDY V

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

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[7] 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.

MATES V uses measurements taken during 2018 and 2019, with a comprehensive modeling analysis and emissions inventory based on 2018 data. The previous MATES studies quantified the cancer risks based on the inhalation pathway only. MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazards Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time.

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

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution 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 cardio-respiratory diseases.

Residential areas are also considered to be sensitive receptors 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. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. 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 and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

The nearest offsite sensitive receptors to the project site are the surrounding single-family residences and the students of Sky View ES.

Thresholds of Significance

The analysis of the project's air quality impacts follows the guidance and methodologies recommended in South Coast AQMD's *CEQA Air Quality Handbook* and the significance thresholds on South Coast AQMD's website (South Coast AQMD 1993). 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. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

REGIONAL SIGNIFICANCE THRESHOLDS

The South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 5, *South Coast AQMD Significance Thresholds*, lists South Coast AQMD's regional significance thresholds that are applicable for all projects uniformly regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA or CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, South Coast AQMD has not developed thresholds for them.

Table 5 South Coast AQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
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: South Coast AQMD 2023.

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. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased 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, $PM_{2.5}$)
- Linked to lower birth weight in newborns ($PM_{2.5}$) (South Coast AQMD 2015a)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of

Southern California scientists responsible for a landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015b).

South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB and has established thresholds that would be protective of these individuals. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS. Mass emissions thresholds shown in Table 4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. These thresholds are based on the trigger levels for the federal New Source Review Program, which was created to ensure projects are consistent with attainment of health-based federal AAQS. Regional emissions from a single project do not trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed previously. Projects that do not exceed the South Coast AQMD regional significance thresholds in Table 4 would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emissions levels presented in Table 4, then those emissions would cumulatively contribute to the nonattainment status of the air basin and would contribute to elevating health effects associated with these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions in Table 4, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment, because mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited previously.

South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health to address the issue raised in *Sierra Club v. County of Fresno* (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978. South Coast AQMD currently does not have methodologies that would provide the City with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a project's mass emissions.[8] Ozone concentrations are dependent on a variety of

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

complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, and the absence of modeling tools that could provide statistically valid data and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects, it is not possible to link specific health risks to the magnitude of emissions exceeding the significance thresholds. However, if a project in the SoCAB exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SoCAB.

CO HOTSPOTS

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards 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. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in 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 the South Coast AQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards.[9] As identified in the 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 previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2023).

LOCALIZED SIGNIFICANCE THRESHOLDS

The South Coast AQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at the project site (offsite mobile-source emissions are not included in the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS and are shown in Table 6, *South Coast AQMD Localized Significance Thresholds*.

[9] 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 (South Coast AQMD 2003).

Table 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 $\mu g/m^3$
24-Hour $PM_{2.5}$ Standard – Construction (South Coast AQMD)[1]	10.4 $\mu g/m^3$
24-Hour PM_{10} Standard – Operation (South Coast AQMD)[1]	2.5 $\mu g/m^3$
24-Hour $PM_{2.5}$ Standard – Operation (South Coast AQMD)[1]	2.5 $\mu g/m^3$

Source: South Coast AQMD 2023.
ppm – parts per million; $\mu g/m^3$ – 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 (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5 for projects under 5-acres. These "screening-level" LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the project to the localized concentrations shown in Table 5.

In accordance with South Coast AQMD's LST methodology, the screening-level construction LSTs are based on the acreage disturbed per day based on equipment use. The screening-level construction LSTs for the project site in SRA 24 are shown in Table 7, *South Coast AQMD Screening-Level Localized Significance Thresholds,* for NO_X, CO, PM_{10}, and $PM_{2.5}$.

Table 7 South Coast AQMD Screening-Level Localized Significance Thresholds

	Threshold (lbs/day)[1]			
Acreage Disturbed	Nitrogen Oxides (NO_X)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
≤1.00 Acre Disturbed Per Day: Project Site	118	602	4	3
1.88-Acre Disturbed Per Day	163	848	7	4
2.00-Acre Disturbed Per Day	170	883	7	4

Source: South Coast AQMD 2008 and 2011.
[1] Screening level LSTs are based on receptors within the minimum reference distance of 82 feet (25 meters) in SRA 24 – Perris Valley.

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 8, *South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for operation of a project. The type of land uses that typically generate substantial quantities of criteria air pollutants and TACs from operations include industrial (stationary sources) and warehousing (truck idling) land uses (CARB 2005). As park and recreational uses do not use substantial quantities of TACs, thus these thresholds are typically applied to new industrial projects only. Additionally, the purpose of this environmental evaluation is to identify the significant effects of the Project on the environment, not the significant effects of the environment on the project (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478)).

Table 8 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds

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

Source: South Coast AQMD 2023.

GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHG, to the atmosphere. Climate change is the variation of Earth's climate over time, whether due to natural variability or as a result of human activities. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor,[10] carbon (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[11] The major GHG are briefly described below.

- **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.

10 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, but part of the feedback loop rather than a primary cause of change.

11 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 2017). However, state and national GHG inventories do not yet 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.

- **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 municipal landfills and water treatment facilities.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 10, *GHG Emissions and Their Relative Global Warming Potential Compared to CO_2*. 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 Fifth Assessment Report (AR5) GWP values for CH_4, a project that generates 10 MT of CH_4 would be equivalent to 280 MT of CO_2.[12]

Table 10 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO_2[1]	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO_2[1]	Sixth Assessment Report (AR6) Global Warming Potential Relative to CO_2[1]
Carbon Dioxide (CO_2)	1	1	1
Methane[2] (CH_4)	25	28	30
Nitrous Oxide (N_2O)	298	265	273

Source: IPCC 2007, 2013, and 2023.
Notes: The IPCC published updated GWP values in its Sixth Assessment Report (AR6) that reflect latest information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2. However, GWP values identified in AR5 are used by the 2022 Scoping Plan for long-term emissions forecasting.
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.

GHG Regulatory Setting

REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not 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 (US EPA 2009).

To regulate GHGs from passenger vehicles, 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—

12 The global warming potential of a GHG is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

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 Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO_2 per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2021 to 2035)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (mpg) in 2025. On March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026.

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

On June 7, 2024, NHTSA announced final CAFE standards for passenger cars and light trucks built in model years 2027-2031 and final fuel efficiency standards for heavy-duty pickup trucks and vans built in model years 2030-2035. The final rules establish standards that would require an industry fleet-wide average of approximately 50.4 mpg for passenger cars and light trucks in model year 2031, by increasing fuel economy by 2 percent year over year for passenger cars (model years 2027-2031) and for light trucks (model years 2029-2031). For heavy-duty pickup trucks and vans, the final rule would increase fuel efficiency at a rate of 10 percent per year (model years 2030-2032) and 8 percent per year (model years 2033-2035) (NHTSA 2024).

Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles

In 2024, the EPA issued a final rule, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, that sets new, more protective standards to reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027 (USEPA 2024b). The final rule builds upon EPA's final standards for federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026 and leverages advances in clean car technology to help improve public health from vehicle emissions. These standards will phase in over model years 2027 through

2032. For light-duty vehicles, the standards are projected to result in an industry-wide average target for the light-duty fleet of 85 grams/mile (g/mile) of CO_2 in model year 2032, representing a nearly 50 percent reduction in projected fleet average emissions target levels relative to the existing MY 2026 standards (USEPA 2024c). The medium-duty vehicle standards are projected to result in an average target of 274 g/mile of CO_2 by MY 2032, representing a 44 percent reduction in projected fleet average emissions target levels relative to the existing MY 2026 standards (USEPA 2024c). Overall, EPA projects that cumulative CO2 reductions as a result of the new standards are approximately 7.2 billion metric tons over the life of the program (USEPA 2024c).

REGULATION OF GHG EMISSIONS ON A STATE LEVEL

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

Executive Order S-3-05

Executive Order S-3-05, signed June 1, 2005. Executive Order S-3-05 set the following GHG reduction targets for the State:

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

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

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

Executive Order B-30-15

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. EO B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, "Safeguarding California", 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 SB 32 and AB 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, set 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 that 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 that 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.

Assembly Bill 1279

AB 1279, signed by Governor Newsom in September 2022, codified the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels for anthropogenic GHG emissions. SB 1279 also requires CARB to update the Scoping Plan to address these new targets.

2022 Climate Change Scoping Plan

CARB adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State's anthropogenic GHG emissions (CARB 2022a). The Scoping Plan provides updates to the previously adopted 2017 Scoping Plan and addresses the carbon neutrality goals of EO B-55-18 (discussed below) and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. The 2022 Scoping Plan updates the target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the recent Sixth Assessment Report (AR6) of the IPCC and the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB's 2022 Scoping Plan identifies strategies as shown in Table 11, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process towards the State's carbon neutrality goals.

Table 11 Priority Strategies for Local Government Climate Action Plans

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide EV charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
VMT Reduction	Reduce or eliminate minimum parking standards.

Table 11 Priority Strategies for Local Government Climate Action Plans

Priority Area	Priority Strategies
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements)
Building Decarbonization	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances.
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing).
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Source: CARB 2022.

Based on Appendix D of the 2022 CARB Climate Change Scoping Plan, for residential and mixed-use development projects, CARB recommends first demonstrating that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

- Transportation Electrification
  - Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.
- VMT Reduction
  - Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
  - Does not result in the loss or conversion of the State's natural and working lands;

- Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS);
- Reduces parking requirements by:
  - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
  - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or
  - For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
- At least 20 percent of the units are affordable to lower-income residents;
- Result in no net loss of existing affordable units.

■ Building Decarbonization

- Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking (CARB 2022a).

If the first approach to demonstrating consistency is not applicable (such as in the case of this school modernization project), the second approach to project-level alignment with state climate goals is to achieve net zero GHG emissions. The third approach to demonstrating project-level alignment with state climate goals is to align with GHG thresholds of significance, which many local air quality management (AQMDs) and air pollution control districts (APCDs) have developed or adopted (CARB 2022).

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 (MPO). 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 is 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. CARB adopted revised SB 375 targets for the MPOs in March 2018. The updated targets became effective in October2018. All SCSs adopted after October 1, 2018, are subject to these new targets. CARB's updated SB 375 targets for the SCAG region were an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of "percent per capita" reductions in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies, such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

SCAG's Regional Transportation Plan / Sustainable Communities Strategy

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

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through the horizon year 2050 (SCAG 2024). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. It also forecasts that implementation of the plan will reduce VMT per capita in year 2050 by 6.3 percent compared to baseline conditions for that year. Connect SoCal includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2024).

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 at the beginning of this Section 5.5.2 under "Federal.") In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new 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 required a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and uses 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 identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate 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 to 80 percent below 1990 levels.

Executive Order N-79-20

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

Renewables Portfolio: Carbon Neutrality Regulations

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

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. 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. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. It requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2045.

Energy Efficiency Regulations

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 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 August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards went into effect on January 1, 2023, replacing the existing 2019 standards. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).

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.[13] The mandatory provisions of CALGreen became effective January 1, 2011. In 2021, the CEC approved the 2022 CALGreen, which went into effect on January 1, 2023, replacing the existing 2019 standards.

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

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of

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

CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

AB 1327

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

AB 1826

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

Water Efficiency Regulations

SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water 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 CH_4. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017a). In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these charbroilers by over 80 percent (CARB 2017). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the South Coast Air Basin.

Existing Conditions

CALIFORNIA'S GREENHOUSE GAS SOURCES AND RELATIVE CONTRIBUTION

In 2023, the statewide GHG emissions inventory was updated for 2000 to 2021 emissions using the GWPs in IPCC's AR4 and reported that California produced 381.3 $MMTCO_2e$ GHG emissions in 2021 (49.7 $MMTCO_2e$ below the 2020 GHG Limit of 431 $MMTCO_2e$) (IPCC 2013). The growth in statewide emissions from 2020 to 2021 was likely due in large part to the increase of transportation and other economic activity that occurred in 2021 relative to 2020 as the California emerged from the COVID-19 pandemic.

California's transportation sector was the single-largest generator of GHG emissions, producing 38.2 percent of the state's total emissions. Industrial sector emissions made up 19.4 percent, and electric power generation made up 16.4 percent of the state's emissions inventory. Other major sectors of GHG emissions include residential and commercial (10.2 percent), agriculture and forestry (8.1 percent), high GWP (5.6 percent), and recycling and waste (2.2 percent) (CARB 2023).

Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2014, statewide GHG emissions dropped below the 2020 GHG Limit (AB 32 target for year 2020) and have remained below the Limit since that time. Additionally, per capita GHG emissions have dropped from a 2001 peak of 13.8 $MTCO_2e$ per person to 9.7 $MTCO_2e$ per person in 2021, a 30 percent decrease.

Transportation emissions increased from 2020, likely from passenger vehicles whose emissions rebounded after COVID-19 shelter-in-place orders were lifted. Electricity emissions also increased compared to 2020; however, there has been continued growth of in-state solar generation and imported renewable electricity. High-GWP emissions have continued to increase as high-GWP gases replace ozone-depleting substances being phased out under the 1987 Montreal Protocol. Overall trends in the inventory also continue to demonstrate that the carbon intensity of California's economy (i.e., the amount of carbon pollution per million dollars of gross domestic product) is declining. From 2000 to 2021, the carbon intensity of California's economy decreased by 50.8 percent while the gross domestic product increased by 67.9 percent (CARB 2023).

Thresholds of Significance

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[14]

SOUTH COAST AQMD WORKING GROUP

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). The South Coast AQMD Working Group (Meeting No. 15) identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010a):

- **Tier 1.** If a project is exempt from CEQA, project-level and 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 (i.e., city or county), project-level and cumulative GHG emissions are less than significant.
- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and 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. The South Coast AQMD Working Group identified a screening-level threshold of 3,000 $MTCO_2e$ annually for all land use types or the

[14] The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

following land-use-specific thresholds: 1,400 $MTCO_2e$ for commercial projects, 3,500 $MTCO_2e$ for residential projects, or 3,000 $MTCO_2e$ for mixed-use projects. These bright-line thresholds 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 identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions:

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

  The South Coast AQMD Working Group 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) for the year 2020.[15] 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.

Based on the recommendation of the South Coast AQMD Working Group, the bright-line screening-level criterion of 3,000 $MTCO_2e$/yr is used as the significance threshold for this project (South Coast AQMD 2010b). Therefore, if the project operation-phase emissions exceed the 3,000 $MTCO_2e$/yr threshold, GHG emissions would be considered potentially significant in the absence of mitigation measures.

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

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CalEEMod Construction Inputs: Sky View Elementary School

Name: Sky View Elementary School
Project Location: Riverside County
Land Use Setting: Suburban

General Info

Project Site Area (Acre): **2.24** acres

New Building Info[1]

Land Use	Building Square Feet	Footprint Square Feet
Proposed Two-Story Classroom Building	19,663	11,639
Kitchen Expansion	967	967
Shade Structures((2) Four-Post Hip)	0	2,400
Shade Structures((2) Single-Post Pyramid Cantilever)	0	392
	20,630	**15,398**

[1] *Provided by District.*

New Pavement and Hardscape[1]

Asphalt Pavement	42,439	square feet
Total Hardscape:	14,919	square feet
Total Landscaping:	25,000	square feet

[1] *Provided by District.*

CalEEMod Land Use Inputs

Land Use	Land Use Amount	Metric	Acres	Building Square Feet	Landscaping (SF)
Elementary School	20.630	1000 BSF	0.3535	20,630	25,000
Asphalt Surfaces	0.974	acre	0.9743	0	
Other Non-Asphalt Surfaces	0.916	acre	0.9164		
Total			**2.2442**	**20,630**	

Asphalt Demolition

Phases	Total Demolition Square Feet[1]	Total Demolition Debris Export (Ton)	Haul Truck Capacity (Ton)[2]	Haul Distance (mile)[2]	Total Trip Ends	Duration (days)	Trip Ends/Day
Asphalt Demolition	48,000	711	8	20	178	24	7

[1] *Provided by District.*
[2] *CalEEMod v2022 default.*

Soil Hauling

Phases	Total Export Volume (Cubic Yard)[1]	Haul Truck Capacity (Cubic Yard)[2]	Haul Distance (mile)[2]	Total Trip Ends	Duration (days)	Trip Ends/Day
Rough Grading	650	16	20	81	6	14

[1] *Provided by District.*

[2] *CalEEMod v2022 default.*

Architectural Coating

Land Use	Percentage of Buildings' Exterior Area Painted (%):[1]	Percentage of Buildings' Interior Area Painted (%):[1]	VOC Content of Exterior Paint (grams/liter):[1]	VOC Content of Interior Paint (grams/liter):[1]
Proposed Two-Story Classroom Building	100%	100%	100	100
Kitchen Expansion	100%	100%	100	100

Land Use	Land Use Amount (BSF)	CalEEMod Paintable Surface Area Multiplier[2]	Total Paintable Surface Area (BSF)	Total Paintable Interior Surface Area (BSF)[2]	Total Paintable Exterior Surface Area (BSF)[2]	Parking Surface Area (BSF)[2]
Elementary School	20,630	2.0	41,260	30,945	10,315	n/a
Asphalt Surfaces	42,439	0.06	2,546	n/a	n/a	2,546
Other Non-Asphalt Surfaces	14,919	0.06	895	n/a	n/a	895
			Total Surface	***0***	***0***	***3,441***

[1] *CalEEMod v2022 defaults.*

[2] *Based on CalEEMod methodology in calculating the paintable surface areas for nonresidential buildings and parking land uses.*

Construction Activities and Schedule Assumptions: Sky View Elementary School*

**Based on information provided or verified by the District.*

CalEEMod Default Schedule

Construction Activities	Construction Schedule			
	Start Date	**End Date**	**Duration (Workday)**	**Duration (Calendar Day)**
Demolition	**5/6/2025**	**6/3/2025**	**20**	**28**
Site Preparation	**6/4/2025**	**6/8/2025**	**3**	**4**
Grading	**6/9/2025**	**6/17/2025**	**6**	**8**
Building Construction	**6/18/2025**	**4/22/2026**	**220**	**308**
Paving	**4/23/2026**	**5/7/2026**	**10**	**14**
Architectural Coating	**5/8/2026**	**5/22/2026**	**10**	**14**

Adjusted Schedule

	Start Date	End Date	Calendar Days
CalEEMod Default Schedule	5/6/2025	5/22/2026	381
District Provided Schedule	5/1/2025	7/1/2026	426

Duration Adjustment Factor: 1.12

Construction Activities	Adjusted Construction Schedule			
	Start Date	**End Date**	**Duration (Workday)**	**Duration (Calendar Day)**
Demolition	**5/6/2025**	**6/7/2025**	**24**	**32**
Site Preparation	**6/8/2025**	**6/13/2025**	**5**	**5**
Grading	**6/14/2025**	**6/23/2025**	**6**	**9**
Building Construction	**6/24/2025**	**6/4/2026**	**248**	**345**
Paving	**6/5/2026**	**6/21/2026**	**11**	**16**
Architectural Coating	**6/22/2026**	**7/8/2026**	**13**	**16**

Construction Equipment Mix

Modeled Equipment Mix[1]

CalEEMod Equipment Type	Pieces of Equipment[2]	Max Daily Hrs Op[2]	HP[2]	Load Factor[2]	Worker Trips/ Day[2]	Vendor Trips/ Day[3]	Haul Trips Per Day	Onsite Truck Travel (mile)[4]
Asphalt Demolition					**Default (13)**	**2**	**7**	
Concrete/Industrial Saw	1	8	33					
Rubber Tired Dozer	1	8	367					
Tractor/Loader/Backhoe	3	8	84					
Water truck[5]	**1**	n/a	n/a	n/a		**2**		
Onsite Truck	**1**	n/a	n/a	n/a				**1.6500**
Site Preparation					**Default (8)**	**8**		
Grader	1	8	148					
Scraper	1	8	423					
Tractor/Loader/Backhoe	1	8	84					
Water truck[5]	**4**	n/a	n/a	n/a		**8**		
Onsite Truck	**1**	n/a	n/a	n/a				**1.2375**
Rough Grading					**Default (10)**	**6**	**14**	
Grader	1	8	148					
Rubber Tired Dozer	1	8	367					
Tractor/Loader/Backhoe	2	7	84					
Water truck[5]	**3**	n/a	n/a	n/a		**6**		
Onsite Truck	**1**	n/a	n/a	n/a				**0.8250**
Building Construction					**Default (9)**	**Default (3)**		
Cranes	1	8	367					
Forklift	2	7	82					
Generator Set	1	8	14					
Tractor/Loader/Backhoe	1	6	84					
Welders	3	8	46					
Asphalt Paving					**Default (15)**	**Default (0)**		
Cement and Mortar Mixer	1	8	10					
Paver	1	8	81					
Paving Equipment	1	8	89					
Roller	2	8	36					
Tractor/Loader/Backhoe	1	8	84					
Architectural Coating					**Default (2)**	**Default (0)**		
Air Compressors	1	6	37	0.48				

1 Equipment mix based on CalEEMod defaults and confirmed by the District.

2 CalEEMod v2022 default.

3 Indicated Defaults are based on CalEEMod defaults.

4 Represents onsite water truck travel distance and based on 0.825 mi/acre.

5 Based on 10,000 gallons per acre disturbed and a 4,000 gallon water truck. 2005, June 5. Maricopa Air Quality Department. Guidance for Application for Dust Control Permit. https://www.epa.gov/sites/default/files/2019-04/documents/mr_guidanceforapplicationfordustcontrolpermit.pdf

Pavement Volume to Weight Conversion

Component	Total SF of Area[1]	Assumed Thickness (foot)[2]	Debris Volume (cu. ft)	Weight of Crushed Asphalt (lbs/cf)[3]	AC Mass (lbs)	AC Mass (tons)
Asphalt Demolition	48,000	0.333	16,000	89	1,422,222	711.11
Total	48,000					711

[1] Provided by the District.

[2] Pavements and Surface Materials. Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Connecticut Cooperative Extension System, 1999.

[3] https://www.delmar.ca.us/DocumentCenter/View/5668/CalRecycle-Conversion-Table

CalEEMod Land Use Inputs: Operation - Proposed Project

Name:	Sky View Elementary School
Project Location:	Riverside County
Land Use Setting:	Suburban
Builout Operational Year:	2026

General Info

Project Site Area (Acre): **2.24** acres

New Building Info[1]

Building	Building Square Feet	Footprint Square Feet
Proposed Two-Story Classroom Building	19,663	10,700
Kitchen Expansion	967	2,000
	20,630	**12,700**

[1] *Provided by District.*

New Pavement and Hardscape[1]

Asphalt Pavement	42,439	square feet
Total Hardscape:	14,919	square feet
Total Landscaping:	25,000	square feet

[1] *Provided by District.*

CalEEMod Land Use Inputs

CalEEMod Land Use	Land Use Amount	Metric	Acres	Building Square Feet	Landscaping (SF)
Elementary School	20.630	1000 BSF	0.2916	20,630	25,000
Asphalt Surfaces	0.974	acre	0.9743	0	
Other Non-Asphalt Surfaces	0.916	acre	0.9164	0	
Total			**2.2442**	**20,630**	

Trip Generation

	Weekday[1]
Elementary School Daily Average Trip Generation	*740*
Adjusted Trip Generation Rate	***35.8700921***
Pass-By Trips	n/a

Weekday Trip Sub-Type

Land Use	Default Primary[2]	Default Diverted[2]	Total Primary and Diverted Percentages	Default Pass-By[2]	Total Trip Subtype Percentages
Elementary School Daily Average Trip Generation	100%	0%	100%	0%	100%

[1] Based on information provided by Garland Associates.

[2] CalEEMod v2022 defaults.

Architectural Coating

Land Use	Percentage of Buildings' Exterior Area Painted (%):[1]	Percentage of Buildings' Interior Area Painted (%):[1]	VOC Content of Exterior Paint (grams/liter):[1]	VOC Content of Interior Paint (grams/liter):[1]
Proposed Two-Story Classroom Building	100%	100%	100	100
Kitchen Expansion	100%	100%	100	100

Land Use	Land Use Amount (BSF)	CalEEMod Paintable Surface Area Multiplier[2]	Total Paintable Surface Area (BSF)	Total Paintable Interior Surface Area (BSF)[2]	Total Paintable Exterior Surface Area (BSF)[2]	Parking Surface Area (BSF)[2]
Elementary School[1]	20,630	2.0	41,260	30,945	10,315	n/a
Asphalt Surface	42,439	0.06	2,546	n/a	n/a	2,546
Non-Asphalt Surface	14,919	0.06	895	n/a	n/a	895
			Total Surface	***0***	***0***	***3,441***

[1] CalEEMod v2022 defaults.

[2] Based on CalEEMod methodology in calculating the paintable surface areas for nonresidential buildings and parking land uses.

Energy (Land Uses)

Annual PV System Electricity Generation:	53,347	kWh/yr
Percentage of Electricity from PV System:	6%	

			Title 24		Non-Title 24	
Land Use	Electricity (kWh/yr)[1]	Natural Gas (kBTU/yr)[1]	Electricity (kWh/yr)[1]	Natural Gas (kBTU/yr)[1]	Electricity (kWh/yr)[1]	Natural Gas (kBTU/yr)[1]
Elementary School	134,262	493,891	116,048.81	285,047.61	18,212.83	208,843.61

[1] CalEEMod v2022 defaults.

Water Use

Land Use		Total Annual Indoor Water Generation[1]	Total Annual Outdoor Water Generation[1]
Elementary School		598,206	880,873
	Total	**598,206**	**880,873**

	CalEEMod Default (%)[1]
Septic	10.33
Aerobic	87.46
Facultative Lagoon	2.21
	100.00

[1] *CalEEMod v2022 defaults.*

Solid Waste[1]

[1] *CalEEMod v2022 defaults.*

Land Use		Annual Solid Waste Generated (tons/yr)
Elementary School		26.82
	Total	**26.82**

CalEEMod Default Fleet Mix -- Year 2026

Total ADTs: 740

	HHD	LDA	LDT1	LDT2	LHD1	LHD2	MCY	MDV	MH	MHD	OBUS	SBUS	UBUS	TOTAL
FleetMix (Model Default)	1.612637	49.615994	3.798200	20.491958	3.144087	0.896357	2.311907	15.828586	0.601941	1.465692	0.060220	0.133753	0.038668	100
FleetMix (Model Default)	0.016126	0.496160	0.037982	0.204920	0.031441	0.008964	0.023119	0.158286	0.006019	0.014657	0.000602	0.001338	0.000387	100%
Trips	12	367	28	152	23	7	17	117	4	11	0	1	0	740

Regional Construction Emissions Worksheet

Maximum Emissions per phase (pounds/day)

Asphalt Demolition

Summer		ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**										
Off-Road Equipment		1.469161308	13.9271717	15.0867727	0.023921	0.568617796		0.5686178	0.523128371		0.523128371
Demolition							0.639766002	0.639766		0.096878852	0.096878852
Onsite Truck		0.000697763	0.01898841	0.01058219	5.84E-05	0.000109129	1.360318563	1.3604277	0.000109129	0.135848136	0.135957264
Total		**1.469859071**	**13.9461601**	**15.0973549**	**0.02398**	**0.568726925**	**2.000084566**	**2.5688115**	**0.523237499**	**0.232726987**	**0.755964487**
Offsite											
Worker		0.055942299	0.0547022	0.96534913	0	0	0.16338675	0.1633868	0	0.038297593	0.038297593
Vendor		0.001331592	0.06716162	0.02088219	0.00045	0.000899486	0.017111819	0.0180113	0.000899486	0.004727698	0.005627184
Hauling		0.008175476	0.56688747	0.13849255	0.003434	0.009810571	0.134234745	0.1440453	0.009810571	0.037646424	0.047456995
Total		**0.065449367**	**0.6887513**	**1.12472387**	**0.003883**	**0.010710057**	**0.314733314**	**0.3254434**	**0.010710057**	**0.080671714**	**0.091381771**
TOTAL		***1.5353***	***14.6349***	***16.2221***	***0.0279***	***0.5794***	***2.3148***	***2.8943***	***0.5339***	***0.3134***	***0.8473***

Winter		ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**										
Off-Road Equipment											
Demolition											
Onsite Truck											
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Offsite											
Worker											
Vendor											
Hauling											
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL		***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***

Max		ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**										
Off-Road Equipment		1.469161308	13.9271717	15.0867727	0.023921	0.568617796	0	0.5686178	0.523128371	0	0.523128371
Demolition		0	0	0	0	0	0.639766002	0.639766	0	0.096878852	0.096878852
Onsite Truck		0.000697763	0.01898841	0.01058219	5.84E-05	0.000109129	1.360318563	1.3604277	0.000109129	0.135848136	0.135957264
Total		**1.469859071**	**13.9461601**	**15.0973549**	**0.02398**	**0.568726925**	**2.000084566**	**2.5688115**	**0.523237499**	**0.232726987**	**0.755964487**
Offsite											
Worker		0.055942299	0.0547022	0.96534913	0	0	0.16338675	0.1633868	0	0.038297593	0.038297593
Vendor		0.001331592	0.06716162	0.02088219	0.00045	0.000899486	0.017111819	0.0180113	0.000899486	0.004727698	0.005627184
Hauling		0.008175476	0.56688747	0.13849255	0.003434	0.009810571	0.134234745	0.1440453	0.009810571	0.037646424	0.047456995
Total		**0.065449367**	**0.6887513**	**1.12472387**	**0.003883**	**0.010710057**	**0.314733314**	**0.3254434**	**0.010710057**	**0.080671714**	**0.091381771**
TOTAL		***1.5353***	***14.6349***	***16.2221***	***0.0279***	***0.5794***	***2.3148***	***2.8943***	***0.5339***	***0.3134***	***0.8473***

Site Preparation

Summer		ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**										
Off-Road Equipment		1.18955807	10.8604555	10.9730311	0.025089	0.472179524		0.4721795	0.434405161		0.434405161
Dust From Material Movement							0.620392719	0.6203927		0.066987863	0.066987863
Onsite Truck		0.000688669	0.01769706	0.01040031	4.93E-05	8.18466E-05	1.020238922	1.0203208	8.18466E-05	0.101886102	0.101967948
Total		**1.190246739**	**10.8781526**	**10.9834314**	**0.025138**	**0.472261371**	**1.640631642**	**2.112893**	**0.434487008**	**0.168873965**	**0.603360973**
Offsite											
Worker		0.033565379	0.03282132	0.57920948	0	0	0.09803205	0.0980321	0	0.022978556	0.022978556
Vendor		0.005326368	0.2686465	0.08352874	0.001799	0.003597944	0.068447276	0.0720452	0.003597944	0.018910791	0.022508735
Hauling		0	0	0	0	0	0	0	0	0	0
Total		**0.038891748**	**0.30146782**	**0.66273822**	**0.001799**	**0.003597944**	**0.166479326**	**0.1700773**	**0.003597944**	**0.041889347**	**0.045487291**
TOTAL		***1.2291***	***11.1796***	***11.6462***	***0.0269***	***0.4759***	***1.8071***	***2.2830***	***0.4381***	***0.2108***	***0.6488***

Winter		ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**										
Off-Road Equipment											
Dust From Material Movement											
Onsite Truck											
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Offsite											
Worker											
Vendor											
Hauling											
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL		***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***

Max		ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**										
Off-Road Equipment		1.18955807	10.8604555	10.9730311	0.025089	0.472179524	0	0.4721795	0.434405161	0	0.434405161
Dust From Material Movement		0	0	0	0	0	0.620392719	0.6203927	0	0.066987863	0.066987863
Onsite Truck		0.000688669	0.01769706	0.01040031	4.93E-05	8.18466E-05	1.020238922	1.0203208	8.18466E-05	0.101886102	0.101967948
Total		**1.190246739**	**10.8781526**	**10.9834314**	**0.025138**	**0.472261371**	**1.640631642**	**2.112893**	**0.434487008**	**0.168873965**	**0.603360973**
Offsite											
Worker		0.033565379	0.03282132	0.57920948	0	0	0.09803205	0.0980321	0	0.022978556	0.022978556
Vendor		0.005326368	0.2686465	0.08352874	0.001799	0.003597944	0.068447276	0.0720452	0.003597944	0.018910791	0.022508735
Hauling		0	0	0	0	0	0	0	0	0	0
Total		**0.038891748**	**0.30146782**	**0.66273822**	**0.001799**	**0.003597944**	**0.166479326**	**0.1700773**	**0.003597944**	**0.041889347**	**0.045487291**
TOTAL		***1.2291***	***11.1796***	***11.6462***	***0.0269***	***0.4759***	***1.8071***	***2.2830***	***0.4381***	***0.2108***	***0.6488***

Rough Grading

Summer		ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**										
Off-Road Equipment		1.511564318	14.0652014	14.5127074	0.022657	0.64312786		0.6431279	0.59167763		0.59167763
Dust From Material Movement							2.7644362	2.7644362		1.335984575	1.335984575
Onsite truck		0.000679575	0.0164057	0.01021843	4.02E-05	5.45464E-05	0.680159282	0.6802138	5.45464E-05	0.067924068	0.067978632
Total		**1.512243893**	**14.0816071**	**14.5229259**	**0.022697**	**0.643182424**	**3.444595481**	**4.0877779**	**0.591732195**	**1.403908642**	**1.995640837**
Offsite											
Worker		0.044753839	0.04376176	0.7722793	0	0	0.1307094	0.1307094	0	0.030638074	0.030638074
Vendor		0.003994776	0.20148487	0.06264656	0.001349	0.002698458	0.051335457	0.0540339	0.002698458	0.014183093	0.016881551
Hauling		0.015064921	1.04460164	0.25519976	0.006327	0.018077905	0.247353911	0.2654318	0.018077905	0.069370938	0.087448844
Total		**0.063813537**	**1.28984827**	**1.09012562**	**0.007676**	**0.020776364**	**0.429398769**	**0.4501751**	**0.020776364**	**0.114192106**	**0.134968469**
TOTAL		***1.5761***	***15.3715***	***15.6131***	***0.0304***	***0.6640***	***3.8740***	***4.5380***	***0.6125***	***1.5181***	***2.1306***

Winter		ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**										
Off-Road Equipment											
Dust From Material Movement											
Onsite Truck											
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Offsite											
Worker											

Vendor										
Hauling										
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***

Max	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
2025										
Onsite										
Off-Road Equipment	1.511564318	14.0652014	14.5127074	0.022657	0.64312786	0	0.6431279	0.59167763	0	0.59167763
Dust From Material Movement	0	0	0	0	0	2.7644362	2.7644362	0	1.335984575	1.335984575
Onsite Truck	0.000679575	0.0164057	0.01021843	4.02E-05	5.45644E-05	0.680159282	0.6802138	5.45644E-05	0.067924068	0.067978632
Total	**1.512243893**	**14.0816071**	**14.5229259**	**0.022697**	**0.643182424**	**3.444595481**	**4.0877779**	**0.591732195**	**1.403908642**	**1.995640837**
Offsite										
Worker	0.044753839	0.04376176	0.7722793	0	0	0.1307094	0.1307094	0	0.030638074	0.030638074
Vendor	0.003994776	0.20148487	0.06264656	0.001349	0.002698458	0.051335457	0.0540339	0.002698458	0.014183093	0.016881551
Hauling	0.015064921	1.04460164	0.25519976	0.006327	0.018077905	0.247353911	0.2654318	0.018077905	0.069370938	0.087448844
Total	**0.063813537**	**1.28984827**	**1.09012562**	**0.007676**	**0.020776364**	**0.429398769**	**0.4501751**	**0.020776364**	**0.114192106**	**0.134968469**
TOTAL	***1.5761***	***15.3715***	***15.6131***	***0.0304***	***0.6640***	***3.8740***	***4.5380***	***0.6125***	***1.5181***	***2.1306***

Building Construction

Summer	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
2025										
Onsite										
Off-Road Equipment	1.238536438	10.5979825	11.8544796	0.023118	0.404392696		0.4043927	0.372041281		0.372041281
Onsite Truck	0	0	0	0	0	0	0	0	0	0
Total	**1.238536438**	**10.5979825**	**11.8544796**	**0.023118**	**0.404392696**	**0**	**0.4043927**	**0.372041281**	**0**	**0.372041281**
Offsite										
Worker	0.038777412	0.03791781	0.66914913	0	0	0.113254467	0.1132545	0	0.026546666	0.026546666
Vendor	0.002251227	0.11354536	0.03530402	0.00076	0.001520697	0.028929729	0.0304504	0.001520697	0.007992781	0.009513477
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.041028639**	**0.15146317**	**0.70445314**	**0.00076**	**0.001520697**	**0.142184196**	**0.1437049**	**0.001520697**	**0.034539446**	**0.036060143**
TOTAL	***1.2796***	***10.7494***	***12.5589***	***0.0239***	***0.4059***	***0.1422***	***0.5481***	***0.3736***	***0.0345***	***0.4081***

Winter	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
2025										
Onsite										
Off-Road Equipment	1.238536438	10.5979825	11.8544796	0.023118	0.404392696		0.4043927	0.372041281		0.372041281
Onsite Truck	0	0	0	0	0	0	0	0	0	0
Total	**1.238536438**	**10.5979825**	**11.8544796**	**0.023118**	**0.404392696**	**0**	**0.4043927**	**0.372041281**	**0**	**0.372041281**
Offsite										
Worker	0.036485151	0.04183376	0.50563452	0	0	0.113254467	0.1132545	0	0.026546666	0.026546666
Vendor	0.00210214	0.11891252	0.03627309	0.00076	0.001520697	0.028929729	0.0304504	0.001520697	0.007992781	0.009513477
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.03858729**	**0.16074628**	**0.54190761**	**0.00076**	**0.001520697**	**0.142184196**	**0.1437049**	**0.001520697**	**0.034539446**	**0.036060143**
TOTAL	***1.2771***	***10.7587***	***12.3964***	***0.0239***	***0.4059***	***0.1422***	***0.5481***	***0.3736***	***0.0345***	***0.4081***

Max	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
2025										
Onsite										
Off-Road Equipment	1.238536438	10.5979825	11.8544796	0.023118	0.404392696	0	0.4043927	0.372041281	0	0.372041281
Onsite Truck	0	0	0	0	0	0	0	0	0	0
Total	**1.238536438**	**10.5979825**	**11.8544796**	**0.023118**	**0.404392696**	**0**	**0.4043927**	**0.372041281**	**0**	**0.372041281**
Offsite										
Worker	0.038777412	0.04183376	0.66914913	0	0	0.113254467	0.1132545	0	0.026546666	0.026546666
Vendor	0.002251227	0.11891252	0.03627309	0.00076	0.001520697	0.028929729	0.0304504	0.001520697	0.007992781	0.009513477
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.041028639**	**0.16074628**	**0.70542221**	**0.00076**	**0.001520697**	**0.142184196**	**0.1437049**	**0.001520697**	**0.034539446**	**0.036060143**
TOTAL	***1.2796***	***10.7587***	***12.5599***	***0.0239***	***0.4059***	***0.1422***	***0.5481***	***0.3736***	***0.0345***	***0.4081***

Summer	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
2026										
Onsite										
Off-Road Equipment	1.178605259	10.107939	11.7594746	0.023116	0.360384011		0.360384	0.33155329		0.33155329
Onsite Truck	0	0	0	0	0	0	0	0	0	0
Total	**1.178605259**	**10.107939**	**11.7594746**	**0.023116**	**0.360384011**	**0**	**0.360384**	**0.33155329**	**0**	**0.33155329**
Offsite										
Worker	0.036676172	0.03400187	0.62215778	0	0	0.113254467	0.1132545	0	0.026546666	0.026546666
Vendor	0.002176684	0.10868509	0.03370878	0.00076	0.001520697	0.028929729	0.0304504	0.001520697	0.007992781	0.009513477
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.038852856**	**0.14268696**	**0.65586656**	**0.00076**	**0.001520697**	**0.142184196**	**0.1437049**	**0.001520697**	**0.034539446**	**0.036060143**
TOTAL	***1.2175***	***10.2506***	***12.4153***	***0.0239***	***0.3619***	***0.1422***	***0.5041***	***0.3331***	***0.0345***	***0.3676***

Winter	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
2026										
Onsite										
Off-Road Equipment	1.178605259	10.107939	11.7594746	0.023116	0.360384011		0.360384	0.33155329		0.33155329
Onsite Truck	0	0	0	0	0	0	0	0	0	0
Total	**1.178605259**	**10.107939**	**11.7594746**	**0.023116**	**0.360384011**	**0**	**0.360384**	**0.33155329**	**0**	**0.33155329**
Offsite										
Worker	0.034574933	0.03791781	0.47182368	0	0	0.113254467	0.1132545	0	0.026546666	0.026546666
Vendor	0.002027596	0.11336645	0.0346033	0.00076	0.001520697	0.028929729	0.0304504	0.001520697	0.007992781	0.009513477
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.036602529**	**0.15128426**	**0.50642698**	**0.00076**	**0.001520697**	**0.142184196**	**0.1437049**	**0.001520697**	**0.034539446**	**0.036060143**
TOTAL	***1.2152***	***10.2592***	***12.2659***	***0.0239***	***0.3619***	***0.1422***	***0.5041***	***0.3331***	***0.0345***	***0.3676***

Max	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
2026										
Onsite										
Off-Road Equipment	1.178605259	10.107939	11.7594746	0.023116	0.360384011	0	0.360384	0.33155329	0	0.33155329
Onsite Truck	0	0	0	0	0	0	0	0	0	0
Total	**1.178605259**	**10.107939**	**11.7594746**	**0.023116**	**0.360384011**	**0**	**0.360384**	**0.33155329**	**0**	**0.33155329**
Offsite										
Worker	0.036676172	0.03791781	0.62215778	0	0	0.113254467	0.1132545	0	0.026546666	0.026546666
Vendor	0.002176684	0.11336645	0.0346033	0.00076	0.001520697	0.028929729	0.0304504	0.001520697	0.007992781	0.009513477
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.038852856**	**0.15128426**	**0.65676108**	**0.00076**	**0.001520697**	**0.142184196**	**0.1437049**	**0.001520697**	**0.034539446**	**0.036060143**
TOTAL	***1.2175***	***10.2592***	***12.4162***	***0.0239***	***0.3619***	***0.1422***	***0.5041***	***0.3331***	***0.0345***	***0.3676***

Asphalt Paving	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite 2026										
Off-Road Equipment	0.666684569	5.87881214	8.18609022	0.011806	0.247979113		0.2479791	0.228140784		0.228140784
Paving	0.232052295									
Onsite Truck	0	0	0	0	0	0	0	0	0	0
Total	**0.898736864**	**5.87881214**	**8.18609022**	**0.011806**	**0.247979113**	**0**	**0.2479791**	**0.228140784**	**0**	**0.228140784**
Offsite										
Worker	0.063493131	0.05886342	1.07706838	0	0	0.1960641	0.1960641	0	0.045957111	0.045957111
Vendor	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.063493131**	**0.05886342**	**1.07706838**	**0**	**0**	**0.1960641**	**0.1960641**	**0**	**0.045957111**	**0.045957111**
TOTAL	***0.9622***	***5.9377***	***9.2632***	***0.0118***	***0.2480***	***0.1961***	***0.4440***	***0.2281***	***0.0460***	***0.2741***

Winter	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite 2026										
Off-Road Equipment										
Paving										
Onsite Truck										
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Offsite										
Worker										
Vendor										
Hauling										
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***

Max	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite 2026										
Off-Road Equipment	0.666684569	5.87881214	8.18609022	0.011806	0.247979113	0	0.2479791	0.228140784	0	0.228140784
Paving	0.232052295	0	0	0	0	0	0	0	0	0
Onsite Truck	0	0	0	0	0	0	0	0	0	0
Total	**0.898736864**	**5.87881214**	**8.18609022**	**0.011806**	**0.247979113**	**0**	**0.2479791**	**0.228140784**	**0**	**0.228140784**
Offsite										
Worker	0.063493131	0.05886342	1.07706838	0	0	0.1960641	0.1960641	0	0.045957111	0.045957111
Vendor	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.063493131**	**0.05886342**	**1.07706838**	**0**	**0**	**0.1960641**	**0.1960641**	**0**	**0.045957111**	**0.045957111**
TOTAL	***0.9622***	***5.9377***	***9.2632***	***0.0118***	***0.2480***	***0.1961***	***0.4440***	***0.2281***	***0.0460***	***0.2741***

Architectural Coating — **Summer**	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite 2026										
Off-Road Equipment	0.120308528	0.85645014	1.13282734	0.001726	0.023153424		0.0231534	0.02130115		0.02130115
Architectural Coatings	15.94221147									
Onsite truck	0	0	0	0	0	0	0	0	0	0
Total	**16.06251999**	**0.85645014**	**1.13282734**	**0.001726**	**0.023153424**	**0**	**0.0231534**	**0.02130115**	**0**	**0.02130115**
Offsite										
Worker	0.007335234	0.00680037	0.12443156	0	0	0.022650893	0.0226509	0	0.005309333	0.005309333
Vendor	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.007335234**	**0.00680037**	**0.12443156**	**0**	**0**	**0.022650893**	**0.0226509**	**0**	**0.005309333**	**0.005309333**
TOTAL	***16.0699***	***0.8633***	***1.2573***	***0.0017***	***0.0232***	***0.0227***	***0.0458***	***0.0213***	***0.0053***	***0.0266***

Winter	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite 2026										
Off-Road Equipment										
Architectural Coatings										
Onsite truck										
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Offsite										
Worker										
Vendor										
Hauling										
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***	***0.0000***

Max	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite 2026										
Off-Road Equipment	0.120308528	0.85645014	1.13282734	0.001726	0.023153424	0	0.0231534	0.02130115	0	0.02130115
Architectural Coatings	15.94221147	0	0	0	0	0	0	0	0	0
Onsite truck	0	0	0	0	0	0	0	0	0	0
Total	**16.06251999**	**0.85645014**	**1.13282734**	**0.001726**	**0.023153424**	**0**	**0.0231534**	**0.02130115**	**0**	**0.02130115**
Offsite										
Worker	0.007335234	0.00680037	0.12443156	0	0	0.022650893	0.0226509	0	0.005309333	0.005309333
Vendor	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0
Total	**0.007335234**	**0.00680037**	**0.12443156**	**0**	**0**	**0.022650893**	**0.0226509**	**0**	**0.005309333**	**0.005309333**
TOTAL	***16.0699***	***0.8633***	***1.2573***	***0.0017***	***0.0232***	***0.0227***	***0.0458***	***0.0213***	***0.0053***	***0.0266***

	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Max Daily	16.0699	15.3715	16.2221	0.0304	0.6640	3.8740	4.5380	0.6125	1.5181	2.1306
South Coast AQMD Regional Significance Thresholds	**75**	**100**	**550**	**150**	**n/a**	**n/a**	**150**	**n/a**	**n/a**	**55**
Exeeds Threshold?	No	No	No	No			No			No

Localized Construction Emissions Worksheet

Maximum Emissions per phase pounds/day)

Asphalt Demolition

		NOx	CO	PM10 Total	PM2.5 Total
	Summer				
Onsite	**2025**				
	Off-Road Equipment	13.9271717	15.0867727	0.5686178	0.523128371
	Demolition			0.639766	0.096878852
	Onsite Truck	0.01898841	0.01058219	1.3604277	0.135957264
	Total	**13.9461601**	**15.0973549**	**2.5688115**	**0.755964487**
TOTAL		***13.9462***	***15.0974***	***2.5688***	***0.7560***

		NOx	CO	PM10 Total	PM2.5 Total
	Winter				
Onsite	**2025**				
	Off-Road Equipment				
	Demolition				
	Onsite Truck				
	Total	**0**	**0**	**0**	**0**
TOTAL		***0.0000***	***0.0000***	***0.0000***	***0.0000***

		NOx	CO	PM10 Total	PM2.5 Total
	Max				
Onsite	**2025**				
	Off-Road Equipment	13.9271717	15.0867727	0.5686178	0.523128371
	Demolition	0	0	0.639766	0.096878852
	Onsite Truck	0.01898841	0.01058219	1.3604277	0.135957264
	Total	**13.9461601**	**15.0973549**	**2.5688115**	**0.755964487**
TOTAL		***13.9462***	***15.0974***	***2.5688***	***0.7560***
	2.00-Acre Screening-Level LSTs	**170**	**883**	**7**	**4**
	Exceeds?	No	No	No	No

Site Preparation

		NOx	CO	PM10 Total	PM2.5 Total
	Summer				
Onsite	**2025**				
	Off-Road Equipment	10.8604555	10.9730311	0.4721795	0.434405161
	Dust From Material Movement			0.6203927	0.066987863
	Onsite Truck	0.01769706	0.01040031	1.0203208	0.101967948
	Total	**10.8781526**	**10.9834314**	**2.112893**	**0.603360973**
TOTAL		***10.8782***	***10.9834***	***2.1129***	***0.6034***

		NOx	CO	PM10 Total	PM2.5 Total
	Winter				
Onsite	**2025**				
	Off-Road Equipment				
	Dust From Material Movement				
	Onsite Truck				
	Total	**0**	**0**	**0**	**0**
TOTAL		***0.0000***	***0.0000***	***0.0000***	***0.0000***

Max		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2025				
	Off-Road Equipment	10.8604555	10.9730311	0.4721795	0.434405161
	Dust From Material Movement	0	0	0.6203927	0.066987863
	Onsite Truck	0.01769706	0.01040031	1.0203208	0.101967948
	Total	**10.8781526**	**10.9834314**	**2.112893**	**0.603360973**
TOTAL		***10.8782***	***10.9834***	***2.1129***	***0.6034***
	2.00-Acre Screening-Level LSTs	**170**	**883**	**7**	**4**
	Exceeds?	No	No	No	No

Rough Grading

Summer		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2025				
	Off-Road Equipment	14.0652014	14.5127074	0.6431279	0.59167763
	Dust From Material Movement			2.7644362	1.335984575
	Onsite truck	0.0164057	0.01021843	0.6802138	0.067978632
	Total	**14.0816071**	**14.5229259**	**4.0877779**	**1.995640837**
TOTAL		***14.0816***	***14.5229***	***4.0878***	***1.9956***

Winter		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2025				
	Off-Road Equipment				
	Dust From Material Movement				
	Onsite Truck				
	Total	**0**	**0**	**0**	**0**
TOTAL		***0.0000***	***0.0000***	***0.0000***	***0.0000***

Max		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2025				
	Off-Road Equipment	14.0652014	14.5127074	0.6431279	0.59167763
	Dust From Material Movement	0	0	2.7644362	1.335984575
	Onsite Truck	0.0164057	0.01021843	0.6802138	0.067978632
	Total	**14.0816071**	**14.5229259**	**4.0877779**	**1.995640837**
TOTAL		***14.0816***	***14.5229***	***4.0878***	***1.9956***
	1.88-Acre Screening-Level LSTs	**163**	**848**	**7**	**4**
	Exceeds?	No	No	No	No

Building Construction

Summer		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2025				
	Off-Road Equipment	10.5979825	11.8544796	0.4043927	0.372041281
	Onsite Truck	0	0	0	0
	Total	**10.5979825**	**11.8544796**	**0.4043927**	**0.372041281**
TOTAL		***10.5980***	***11.8545***	***0.4044***	***0.3720***

Winter		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2025				
	Off-Road Equipment	10.5979825	11.8544796	0.4043927	0.372041281
	Onsite Truck	0	0	0	0
	Total	**10.5979825**	**11.8544796**	**0.4043927**	**0.372041281**
TOTAL		***10.5980***	***11.8545***	***0.4044***	***0.3720***
	<1-Acre Screening-Level LSTs	**118**	**602**	**4**	**3**
	Exceeds?	No	No	No	No

Max		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2025				
	Off-Road Equipment	10.5979825	11.8544796	0.4043927	0.372041281
	Onsite Truck	0	0	0	0
	Total	**10.5979825**	**11.8544796**	**0.4043927**	**0.372041281**
TOTAL		***10.5980***	***11.8545***	***0.4044***	***0.3720***

Summer		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2026				
	Off-Road Equipment	10.107939	11.7594746	0.360384	0.33155329
	Onsite Truck	0	0	0	0
	Total	**10.107939**	**11.7594746**	**0.360384**	**0.33155329**
TOTAL		***10.1079***	***11.7595***	***0.3604***	***0.3316***

Winter		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2026				
	Off-Road Equipment	10.107939	11.7594746	0.360384	0.33155329
	Onsite Truck	0	0	0	0
	Total	**10.107939**	**11.7594746**	**0.360384**	**0.33155329**
TOTAL		***10.1079***	***11.7595***	***0.3604***	***0.3316***

Max		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2026				
	Off-Road Equipment	10.107939	11.7594746	0.360384	0.33155329
	Onsite Truck	0	0	0	0
	Total	**10.107939**	**11.7594746**	**0.360384**	**0.33155329**
TOTAL		***10.1079***	***11.7595***	***0.3604***	***0.3316***
	<1-Acre Screening-Level LSTs	**118**	**602**	**4**	**3**
	Exceeds?	No	No	No	No

Asphalt Paving

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2026				
	Off-Road Equipment	5.87881214	8.18609022	0.2479791	0.228140784
	Paving				
	Onsite Truck	0	0	0	0
	Total	**5.87881214**	**8.18609022**	**0.2479791**	**0.228140784**
TOTAL		***5.8788***	***8.1861***	***0.2480***	***0.2281***

Winter		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2026				
	Off-Road Equipment				
	Paving				
	Onsite Truck				
	Total	**0**	**0**	**0**	**0**
TOTAL		***0.0000***	***0.0000***	***0.0000***	***0.0000***

Max		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2026				
	Off-Road Equipment	5.87881214	8.18609022	0.2479791	0.228140784
	Paving	0	0	0	0
	Onsite Truck	0	0	0	0
	Total	**5.87881214**	**8.18609022**	**0.2479791**	**0.228140784**
TOTAL		***5.8788***	***8.1861***	***0.2480***	***0.2281***
	<1-Acre Screening-Level LSTs	**118**	**602**	**4**	**3**
	Exceeds?	No	No	No	No

Architectural Coating

		Summer	NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2026**				
	Off-Road Equipment		0.85645014	1.13282734	0.0231534	0.02130115
	Architectural Coatings					
	Onsite truck		0	0	0	0
	Total		**0.85645014**	**1.13282734**	**0.0231534**	**0.02130115**
TOTAL			***0.8565***	***1.1328***	***0.0232***	***0.0213***

		Winter	NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2026**				
	Off-Road Equipment					
	Architectural Coatings					
	Onsite truck					
	Total		**0**	**0**	**0**	**0**
TOTAL			***0.0000***	***0.0000***	***0.0000***	***0.0000***

		Max	NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2026**				
	Off-Road Equipment		0.85645014	1.13282734	0.0231534	0.02130115
	Architectural Coatings		0	0	0	0
	Onsite truck		0	0	0	0
	Total		**0.85645014**	**1.13282734**	**0.0231534**	**0.02130115**
TOTAL			***0.8565***	***1.1328***	***0.0232***	***0.0213***
		<1-Acre Screening-Level LSTs	**118**	**602**	**4**	**3**
		Exceeds?	No	No	No	No

Regional Operational Emissions Worksheet

Summer	Criteria Pollutant Emissions (pounds/day)									
	ROG	**NOx**	**CO**	**SO2**	**Exhaust PM10**	**Fugitive PM10**	**PM10 Total**	**Exhaust PM2.5**	**Fugitive PM2.5**	**PM2.5 Total**
Mobile	2.91543831	2.41836287	22.1337028	0.053679	0.039781051	4.652807793	4.69258884	0.037348402	1.181116723	1.218465125
Area	0.65202059	0.00755142	0.89718559	5.35E-05	0.001594543		0.00159454	0.001204759		0.001204759
Energy	0.00729627	0.13265948	0.11143396	0.000796	0.01008212		0.01008212	0.01008212		0.01008212
Total	**3.575**	**2.559**	**23.142**	**0.055**	**0.051**	**4.653**	**4.704**	**0.049**	**1.181**	**1.230**

Winter	Criteria Pollutant Emissions (pounds/day)									
	ROG	**NOx**	**CO**	**SO2**	**Exhaust PM10**	**Fugitive PM10**	**PM10 Total**	**Exhaust PM2.5**	**Fugitive PM2.5**	**PM2.5 Total**
Mobile	2.71832883	2.59024779	18.8345172	0.050407	0.039812571	4.652807793	4.69262036	0.037378559	1.181116723	1.218495282
Area	0.5047398									
Energy	0.00729627	0.13265948	0.11143396	0.000796	0.01008212		0.01008212	0.01008212		0.01008212
Total	**3.230**	**2.723**	**18.946**	**0.051**	**0.050**	**4.653**	**4.703**	**0.047**	**1.181**	**1.229**

Max Daily	Criteria Pollutant Emissions (pounds/day)									
	ROG	**NOx**	**CO**	**SO2**	**Exhaust PM10**	**Fugitive PM10**	**PM10 Total**	**Exhaust PM2.5**	**Fugitive PM2.5**	**PM2.5 Total**
Mobile	2.915	2.590	22.134	0.054	0.040	4.653	4.693	0.037	1.181	1.218
Area	0.652	0.008	0.897	0.000	0.002	0.000	0.002	0.001	0.000	0.001
Energy	0.007	0.133	0.111	0.001	0.010	0.000	0.010	0.010	0.000	0.010
Total	**3.575**	**2.730**	**23.142**	**0.055**	**0.051**	**4.653**	**4.704**	**0.049**	**1.181**	**1.230**
Regional Thresholds	**55**	**55**	**550**	**150**			**150**			**55**
Exceeds Thresholds?	**No**	**No**	**No**	**No**			No			No

GHG Emissions Worksheet

Construction Total[1]

Year	Annual GHG Emissions ($MTCO_2e$/Year)[2]
2025	203
2026	130
Total	**334**

[1]CalEEMod, Version 2022.1.1.29

[2]$MTCO_2e$=metric tons of carbon dioxide equivalent.

Operation Total[1]

Source	Annual GHG Emissions ($MTCO_2e$/Year)	
Mobile	626.65	88.49%
Area	0.42	0.06%
Energy	58.80	8.30%
Water	2.76	0.39%
Waste	8.37	1.18%
Refrigerants	0.01	0.00%
Amortized Construction[2]	11.12	1.57%
Total	**708.13**	100.00%

[1]CalEEMod, Version 2022.1.1.29

[2]Total construction emissions are amortized over 30 years per South Coast AQMD methodology; South Coast AQMD. 2009, November 19. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 14. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2.

PESD-02 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	PESD-02
Construction Start Date	5/6/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	0.20
Location	625 Mildred St, Perris, CA 92570, USA
County	Riverside-South Coast
City	Perris
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5503
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Elementary School	20.6	1000sqft	0.35	20,630	25,000	25,000	—	—

Other Asphalt Surfaces	42.4	1000sqft	0.97	0.00	0.00	—	—	—
Other Non-Asphalt Surfaces	39.9	1000sqft	0.92	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Water	W-4	Require Low-Flow Water Fixtures

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.1	16.1	15.4	16.2	0.03	0.66	3.87	4.54	0.61	1.52	2.13	—	3,725	3,725	0.13	0.20	3.05	3,792
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.53	1.28	10.8	12.4	0.02	0.41	0.14	0.55	0.37	0.03	0.41	—	2,417	2,417	0.10	0.04	0.02	2,431
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.05	0.97	5.40	6.11	0.01	0.21	0.29	0.50	0.19	0.06	0.25	—	1,220	1,220	0.05	0.03	0.20	1,229
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	0.18	0.98	1.12	< 0.005	0.04	0.05	0.09	0.03	0.01	0.05	—	202	202	0.01	< 0.005	0.03	203

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.90	1.58	15.4	16.2	0.03	0.66	3.87	4.54	0.61	1.52	2.13	—	3,725	3,725	0.13	0.20	3.05	3,792
2026	16.1	16.1	10.3	12.4	0.02	0.36	0.20	0.50	0.33	0.05	0.37	—	2,422	2,422	0.10	0.04	0.70	2,437
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.53	1.28	10.8	12.4	0.02	0.41	0.14	0.55	0.37	0.03	0.41	—	2,417	2,417	0.10	0.04	0.02	2,431
2026	1.46	1.22	10.3	12.3	0.02	0.36	0.14	0.50	0.33	0.03	0.37	—	2,413	2,413	0.09	0.04	0.02	2,426
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.74	0.62	5.40	6.11	0.01	0.21	0.29	0.50	0.19	0.06	0.25	—	1,220	1,220	0.05	0.03	0.20	1,229
2026	1.05	0.97	3.32	4.04	0.01	0.12	0.05	0.17	0.11	0.01	0.12	—	781	781	0.03	0.01	0.10	786
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.14	0.11	0.98	1.12	< 0.005	0.04	0.05	0.09	0.03	0.01	0.05	—	202	202	0.01	< 0.005	0.03	203
2026	0.19	0.18	0.61	0.74	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	129	129	< 0.005	< 0.005	0.02	130

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.90	1.58	15.4	16.2	0.03	0.66	3.87	4.54	0.61	1.52	2.13	—	3,725	3,725	0.13	0.20	3.05	3,792
2026	16.1	16.1	10.3	12.4	0.02	0.36	0.20	0.50	0.33	0.05	0.37	—	2,422	2,422	0.10	0.04	0.70	2,437

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.53	1.28	10.8	12.4	0.02	0.41	0.14	0.55	0.37	0.03	0.41	—	2,417	2,417	0.10	0.04	0.02	2,431
2026	1.46	1.22	10.3	12.3	0.02	0.36	0.14	0.50	0.33	0.03	0.37	—	2,413	2,413	0.09	0.04	0.02	2,426
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.74	0.62	5.40	6.11	0.01	0.21	0.29	0.50	0.19	0.06	0.25	—	1,220	1,220	0.05	0.03	0.20	1,229
2026	1.05	0.97	3.32	4.04	0.01	0.12	0.05	0.17	0.11	0.01	0.12	—	781	781	0.03	0.01	0.10	786
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.14	0.11	0.98	1.12	< 0.005	0.04	0.05	0.09	0.03	0.01	0.05	—	202	202	0.01	< 0.005	0.03	203
2026	0.19	0.18	0.61	0.74	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	129	129	< 0.005	< 0.005	0.02	130

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.82	3.57	2.56	23.1	0.05	0.05	4.65	4.70	0.05	1.18	1.23	15.6	5,861	5,877	1.82	0.25	19.1	6,017
Mit.	3.82	3.57	2.56	23.1	0.05	0.05	4.65	4.70	0.05	1.18	1.23	15.5	5,860	5,876	1.81	0.25	19.1	6,016
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	1%	—	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.47	3.23	2.72	18.9	0.05	0.05	4.65	4.70	0.05	1.18	1.23	15.6	5,526	5,542	1.83	0.26	0.57	5,666
Mit.	3.47	3.23	2.72	18.9	0.05	0.05	4.65	4.70	0.05	1.18	1.23	15.5	5,526	5,541	1.82	0.26	0.57	5,665
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	1%	—	—	< 0.5%

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.72	2.54	2.02	14.7	0.04	0.04	3.32	3.36	0.04	0.84	0.88	15.6	4,089	4,104	1.76	0.19	5.93	4,211
Mit.	2.72	2.54	2.02	14.7	0.04	0.04	3.32	3.36	0.04	0.84	0.88	15.5	4,088	4,104	1.75	0.19	5.93	4,210
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	1%	—	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.50	0.46	0.37	2.67	0.01	0.01	0.61	0.61	0.01	0.15	0.16	2.58	677	680	0.29	0.03	0.98	697
Mit.	0.50	0.46	0.37	2.67	0.01	0.01	0.61	0.61	0.01	0.15	0.16	2.56	677	679	0.29	0.03	0.98	697
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.14	2.92	2.42	22.1	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,490	5,490	0.23	0.25	19.0	5,590
Area	0.66	0.65	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.69	3.69	< 0.005	< 0.005	—	3.70
Energy	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	354	354	0.03	< 0.005	—	355
Water	—	—	—	—	—	—	—	—	—	—	—	1.15	12.7	13.9	0.12	< 0.005	—	17.7
Waste	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	3.82	3.57	2.56	23.1	0.05	0.05	4.65	4.70	0.05	1.18	1.23	15.6	5,861	5,877	1.82	0.25	19.1	6,017
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.95	2.72	2.59	18.8	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,159	5,159	0.24	0.26	0.49	5,243

Area	0.50	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	354	354	0.03	< 0.005	—	355
Water	—	—	—	—	—	—	—	—	—	—	—	1.15	12.7	13.9	0.12	< 0.005	—	17.7
Waste	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	3.47	3.23	2.72	18.9	0.05	0.05	4.65	4.70	0.05	1.18	1.23	15.6	5,526	5,542	1.83	0.26	0.57	5,666
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.09	1.93	1.88	13.9	0.04	0.03	3.32	3.35	0.03	0.84	0.87	—	3,720	3,720	0.17	0.19	5.85	3,785
Area	0.61	0.61	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.53	2.53	< 0.005	< 0.005	—	2.54
Energy	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	354	354	0.03	< 0.005	—	355
Water	—	—	—	—	—	—	—	—	—	—	—	1.15	12.7	13.9	0.12	< 0.005	—	17.7
Waste	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	2.72	2.54	2.02	14.7	0.04	0.04	3.32	3.36	0.04	0.84	0.88	15.6	4,089	4,104	1.76	0.19	5.93	4,211
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.38	0.35	0.34	2.54	0.01	0.01	0.61	0.61	< 0.005	0.15	0.16	—	616	616	0.03	0.03	0.97	627
Area	0.11	0.11	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.42	0.42	< 0.005	< 0.005	—	0.42
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.6	58.6	< 0.005	< 0.005	—	58.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.19	2.11	2.30	0.02	< 0.005	—	2.93
Waste	—	—	—	—	—	—	—	—	—	—	—	2.39	0.00	2.39	0.24	0.00	—	8.37
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.50	0.46	0.37	2.67	0.01	0.01	0.61	0.61	0.01	0.15	0.16	2.58	677	680	0.29	0.03	0.98	697

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.14	2.92	2.42	22.1	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,490	5,490	0.23	0.25	19.0	5,590
Area	0.66	0.65	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.69	3.69	< 0.005	< 0.005	—	3.70
Energy	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	354	354	0.03	< 0.005	—	355
Water	—	—	—	—	—	—	—	—	—	—	—	1.03	12.2	13.2	0.11	< 0.005	—	16.6
Waste	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	3.82	3.57	2.56	23.1	0.05	0.05	4.65	4.70	0.05	1.18	1.23	15.5	5,860	5,876	1.81	0.25	19.1	6,016
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.95	2.72	2.59	18.8	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,159	5,159	0.24	0.26	0.49	5,243
Area	0.50	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	354	354	0.03	< 0.005	—	355
Water	—	—	—	—	—	—	—	—	—	—	—	1.03	12.2	13.2	0.11	< 0.005	—	16.6
Waste	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	3.47	3.23	2.72	18.9	0.05	0.05	4.65	4.70	0.05	1.18	1.23	15.5	5,526	5,541	1.82	0.26	0.57	5,665
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.09	1.93	1.88	13.9	0.04	0.03	3.32	3.35	0.03	0.84	0.87	—	3,720	3,720	0.17	0.19	5.85	3,785
Area	0.61	0.61	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.53	2.53	< 0.005	< 0.005	—	2.54
Energy	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	354	354	0.03	< 0.005	—	355
Water	—	—	—	—	—	—	—	—	—	—	—	1.03	12.2	13.2	0.11	< 0.005	—	16.6
Waste	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	2.72	2.54	2.02	14.7	0.04	0.04	3.32	3.36	0.04	0.84	0.88	15.5	4,088	4,104	1.75	0.19	5.93	4,210
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.38	0.35	0.34	2.54	0.01	0.01	0.61	0.61	< 0.005	0.15	0.16	—	616	616	0.03	0.03	0.97	627
Area	0.11	0.11	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.42	0.42	< 0.005	< 0.005	—	0.42
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.6	58.6	< 0.005	< 0.005	—	58.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.17	2.01	2.19	0.02	< 0.005	—	2.76
Waste	—	—	—	—	—	—	—	—	—	—	—	2.39	0.00	2.39	0.24	0.00	—	8.37
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.50	0.46	0.37	2.67	0.01	0.01	0.61	0.61	0.01	0.15	0.16	2.56	677	679	0.29	0.03	0.98	697

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.75	1.47	13.9	15.1	0.02	0.57	—	0.57	0.52	—	0.52	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.64	0.64	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.36	1.36	< 0.005	0.14	0.14	—	7.14	7.14	< 0.005	< 0.005	0.01	7.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.12	0.10	0.92	0.99	< 0.005	0.04	—	0.04	0.03	—	0.03	—	164	164	0.01	< 0.005	—	165
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.49
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.1	27.1	< 0.005	< 0.005	—	27.2
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.97	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	176	176	0.01	0.01	0.65	179
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.2	61.2	< 0.005	0.01	0.17	64.2
Hauling	0.02	0.01	0.57	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.05	—	511	511	0.01	0.08	1.09	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.02	4.02	< 0.005	< 0.005	< 0.005	4.21
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.6	33.6	< 0.005	0.01	0.03	35.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.67	0.67	< 0.005	< 0.005	< 0.005	0.70

Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.57	5.57	< 0.005	< 0.005	0.01	5.83

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.75	1.47	13.9	15.1	0.02	0.57	—	0.57	0.52	—	0.52	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.64	0.64	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.36	1.36	< 0.005	0.14	0.14	—	7.14	7.14	< 0.005	< 0.005	0.01	7.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.92	0.99	< 0.005	0.04	—	0.04	0.03	—	0.03	—	164	164	0.01	< 0.005	—	165
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.49
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.1	27.1	< 0.005	< 0.005	—	27.2

Demoliti	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.97	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	176	176	0.01	0.01	0.65	179
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.2	61.2	< 0.005	0.01	0.17	64.2
Hauling	0.02	0.01	0.57	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.05	—	511	511	0.01	0.08	1.09	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.02	4.02	< 0.005	< 0.005	< 0.005	4.21
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.6	33.6	< 0.005	0.01	0.03	35.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.67	0.67	< 0.005	< 0.005	< 0.005	0.70
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.57	5.57	< 0.005	< 0.005	0.01	5.83

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	1.42	1.19	10.9	11.0	0.03	0.47	—	0.47	0.43	—	0.43	—	2,717	2,717	0.11	0.02	—	2,726
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.02	1.02	< 0.005	0.10	0.10	—	5.75	5.75	< 0.005	< 0.005	0.01	6.04
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.2	37.2	< 0.005	< 0.005	—	37.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.16	6.16	< 0.005	< 0.005	—	6.18
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.58	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.39	107
Vendor	0.01	0.01	0.27	0.08	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	245	245	0.01	0.04	0.69	257
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.35	1.35	< 0.005	< 0.005	< 0.005	1.37
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.35	3.35	< 0.005	< 0.005	< 0.005	3.51
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.58
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.19	10.9	11.0	0.03	0.47	—	0.47	0.43	—	0.43	—	2,717	2,717	0.11	0.02	—	2,726

Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.02	1.02	< 0.005	0.10	0.10	—	5.75	5.75	< 0.005	< 0.005	0.01	6.04
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.2	37.2	< 0.005	< 0.005	—	37.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.16	6.16	< 0.005	< 0.005	—	6.18
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.58	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.39	107

Vendor	0.01	0.01	0.27	0.08	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	245	245	0.01	0.04	0.69	257
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.35	1.35	< 0.005	< 0.005	< 0.005	1.37
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.35	3.35	< 0.005	< 0.005	< 0.005	3.51
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.58
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	14.1	14.5	0.02	0.64	—	0.64	0.59	—	0.59	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.68	0.68	< 0.005	0.07	0.07	—	4.36	4.36	< 0.005	< 0.005	0.01	4.58

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.23	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.4	40.4	< 0.005	< 0.005	—	40.5
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.68	6.68	< 0.005	< 0.005	—	6.70
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.77	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
Vendor	0.01	< 0.005	0.20	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	184	184	< 0.005	0.03	0.52	193
Hauling	0.04	0.02	1.04	0.26	0.01	0.02	0.25	0.27	0.02	0.07	0.09	—	942	942	0.02	0.15	2.01	988
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.02	3.02	< 0.005	< 0.005	< 0.005	3.16
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.5	15.5	< 0.005	< 0.005	0.01	16.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.52
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.56	2.56	< 0.005	< 0.005	< 0.005	2.69

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	14.1	14.5	0.02	0.64	—	0.64	0.59	—	0.59	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.68	0.68	< 0.005	0.07	0.07	—	4.36	4.36	< 0.005	< 0.005	0.01	4.58
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.03	0.02	0.23	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.4	40.4	< 0.005	< 0.005	—	40.5
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.68	6.68	< 0.005	< 0.005	—	6.70
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.77	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
Vendor	0.01	< 0.005	0.20	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	184	184	< 0.005	0.03	0.52	193
Hauling	0.04	0.02	1.04	0.26	0.01	0.02	0.25	0.27	0.02	0.07	0.09	—	942	942	0.02	0.15	2.01	988
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.02	3.02	< 0.005	< 0.005	< 0.005	3.16
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.5	15.5	< 0.005	< 0.005	0.01	16.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.52
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.56	2.56	< 0.005	< 0.005	< 0.005	2.69

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.46	3.96	4.43	0.01	0.15	—	0.15	0.14	—	0.14	—	823	823	0.03	0.01	—	826
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.72	0.81	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	137
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.67	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	122	122	0.01	< 0.005	0.45	124
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	103	103	< 0.005	0.02	0.29	108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.51	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	112	112	0.01	< 0.005	0.01	114
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	< 0.005	0.02	0.01	108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.5	42.5	< 0.005	< 0.005	0.07	43.1
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.7	38.7	< 0.005	0.01	0.05	40.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.04	7.04	< 0.005	< 0.005	0.01	7.13
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.40	6.40	< 0.005	< 0.005	0.01	6.70
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.46	3.96	4.43	0.01	0.15	—	0.15	0.14	—	0.14	—	823	823	0.03	0.01	—	826
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.72	0.81	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	137
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.67	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	122	122	0.01	< 0.005	0.45	124
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	103	103	< 0.005	0.02	0.29	108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.51	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	112	112	0.01	< 0.005	0.01	114
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	< 0.005	0.02	0.01	108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.5	42.5	< 0.005	< 0.005	0.07	43.1
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.7	38.7	< 0.005	0.01	0.05	40.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.04	7.04	< 0.005	< 0.005	0.01	7.13
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.40	6.40	< 0.005	< 0.005	0.01	6.70
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.07	3.57	0.01	0.11	—	0.11	0.10	—	0.10	—	668	668	0.03	0.01	—	670
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.56	0.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	111	111	< 0.005	< 0.005	—	111
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.62	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	119	119	0.01	< 0.005	0.40	121
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.02	0.28	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	110	110	< 0.005	< 0.005	0.01	111
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.02	0.01	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.8	33.8	< 0.005	< 0.005	0.05	34.2
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.9	30.9	< 0.005	< 0.005	0.04	32.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.59	5.59	< 0.005	< 0.005	0.01	5.66
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.11	5.11	< 0.005	< 0.005	0.01	5.36
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.07	3.57	0.01	0.11	—	0.11	0.10	—	0.10	—	668	668	0.03	0.01	—	670
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.56	0.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	111	111	< 0.005	< 0.005	—	111
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.62	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	119	119	0.01	< 0.005	0.40	121
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.02	0.28	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	110	110	< 0.005	< 0.005	0.01	111
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.02	0.01	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.8	33.8	< 0.005	< 0.005	0.05	34.2
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.9	30.9	< 0.005	< 0.005	0.04	32.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.59	5.59	< 0.005	< 0.005	0.01	5.66
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.11	5.11	< 0.005	< 0.005	0.01	5.36
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	0.67	5.88	8.19	0.01	0.25	—	0.25	0.23	—	0.23	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.5	37.5	< 0.005	< 0.005	—	37.6
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.20	6.20	< 0.005	< 0.005	—	6.23
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	1.08	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	207	207	0.01	0.01	0.70	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.81	5.81	< 0.005	< 0.005	0.01	5.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.96	0.96	< 0.005	< 0.005	< 0.005	0.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	0.67	5.88	8.19	0.01	0.25	—	0.25	0.23	—	0.23	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.5	37.5	< 0.005	< 0.005	—	37.6
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.20	6.20	< 0.005	< 0.005	—	6.23
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	1.08	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	207	207	0.01	0.01	0.70	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.81	5.81	< 0.005	< 0.005	0.01	5.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.96	0.96	< 0.005	< 0.005	< 0.005	0.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134

Architectural Coating	15.9	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.75	4.75	< 0.005	< 0.005	—	4.77
Architectural Coatings	0.57	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.79	0.79	< 0.005	< 0.005	—	0.79
Architectural Coatings	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.9	23.9	< 0.005	< 0.005	0.08	24.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	15.9	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.75	4.75	< 0.005	< 0.005	—	4.77
Architectural Coatings	0.57	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.79	0.79	< 0.005	< 0.005	—	0.79
Architectural Coatings	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.9	23.9	< 0.005	< 0.005	0.08	24.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	3.14	2.92	2.42	22.1	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,490	5,490	0.23	0.25	19.0	5,590
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.14	2.92	2.42	22.1	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,490	5,490	0.23	0.25	19.0	5,590

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	2.95	2.72	2.59	18.8	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,159	5,159	0.24	0.26	0.49	5,243
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.95	2.72	2.59	18.8	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,159	5,159	0.24	0.26	0.49	5,243
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.38	0.35	0.34	2.54	0.01	0.01	0.61	0.61	< 0.005	0.15	0.16	—	616	616	0.03	0.03	0.97	627
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.38	0.35	0.34	2.54	0.01	0.01	0.61	0.61	< 0.005	0.15	0.16	—	616	616	0.03	0.03	0.97	627

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	3.14	2.92	2.42	22.1	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,490	5,490	0.23	0.25	19.0	5,590

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.14	2.92	2.42	22.1	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,490	5,490	0.23	0.25	19.0	5,590
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	2.95	2.72	2.59	18.8	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,159	5,159	0.24	0.26	0.49	5,243
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.95	2.72	2.59	18.8	0.05	0.04	4.65	4.69	0.04	1.18	1.22	—	5,159	5,159	0.24	0.26	0.49	5,243
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.38	0.35	0.34	2.54	0.01	0.01	0.61	0.61	< 0.005	0.15	0.16	—	616	616	0.03	0.03	0.97	627
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.38	0.35	0.34	2.54	0.01	0.01	0.61	0.61	< 0.005	0.15	0.16	—	616	616	0.03	0.03	0.97	627

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.01	< 0.005	—	196
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.01	< 0.005	—	196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.01	< 0.005	—	196
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.01	< 0.005	—	196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	32.4	32.4	< 0.005	< 0.005	—	32.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	32.4	32.4	< 0.005	< 0.005	—	32.5

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.01	< 0.005	—	196
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.01	< 0.005	—	196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.01	< 0.005	—	196
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	196	196	0.01	< 0.005	—	196

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	32.4	32.4	< 0.005	< 0.005	—	32.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	32.4	32.4	< 0.005	< 0.005	—	32.5

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	0.45	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.16	0.15	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.69	3.69	< 0.005	< 0.005	—	3.70
Total	0.66	0.65	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.69	3.69	< 0.005	< 0.005	—	3.70
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.45	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.50	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.42	0.42	< 0.005	< 0.005	—	0.42
Total	0.11	0.11	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.42	0.42	< 0.005	< 0.005	—	0.42

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.45	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.16	0.15	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.69	3.69	< 0.005	< 0.005	—	3.70
Total	0.66	0.65	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.69	3.69	< 0.005	< 0.005	—	3.70
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.45	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.50	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.42	0.42	< 0.005	< 0.005	—	0.42
Total	0.11	0.11	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.42	0.42	< 0.005	< 0.005	—	0.42

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1.15	12.7	13.9	0.12	< 0.005	—	17.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.15	12.7	13.9	0.12	< 0.005	—	17.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1.15	12.7	13.9	0.12	< 0.005	—	17.7

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.15	12.7	13.9	0.12	< 0.005	—	17.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.19	2.11	2.30	0.02	< 0.005	—	2.93
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.19	2.11	2.30	0.02	< 0.005	—	2.93

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1.03	12.2	13.2	0.11	< 0.005	—	16.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	1.03	12.2	13.2	0.11	< 0.005	—	16.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1.03	12.2	13.2	0.11	< 0.005	—	16.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.03	12.2	13.2	0.11	< 0.005	—	16.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.17	2.01	2.19	0.02	< 0.005	—	2.76
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.17	2.01	2.19	0.02	< 0.005	—	2.76

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Element School	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	2.39	0.00	2.39	0.24	0.00	—	8.37
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.39	0.00	2.39	0.24	0.00	—	8.37

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.5	0.00	14.5	1.44	0.00	—	50.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	2.39	0.00	2.39	0.24	0.00	—	8.37
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.39	0.00	2.39	0.24	0.00	—	8.37

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	5/6/2025	6/7/2025	5.00	24.0	—
Site Preparation	Site Preparation	6/8/2025	6/13/2025	5.00	5.00	—
Grading	Grading	6/14/2025	6/23/2025	5.00	6.00	—
Building Construction	Building Construction	6/24/2025	6/4/2026	5.00	248	—
Paving	Paving	6/5/2026	6/21/2026	5.00	11.0	—
Architectural Coating	Architectural Coating	6/22/2026	7/8/2026	5.00	13.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37

Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41

Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	18.5	LDA,LDT1,LDT2
Demolition	Vendor	2.00	10.2	HHDT,MHDT
Demolition	Hauling	7.42	20.0	HHDT
Demolition	Onsite truck	1.00	1.65	HHDT
Site Preparation	—	—	—	—

Site Preparation	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	8.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	1.00	1.24	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	6.00	10.2	HHDT,MHDT
Grading	Hauling	13.7	20.0	HHDT
Grading	Onsite truck	1.00	0.82	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	8.66	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	3.38	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.73	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—

Demolition	Worker	12.5	18.5	LDA,LDT1,LDT2
Demolition	Vendor	2.00	10.2	HHDT,MHDT
Demolition	Hauling	7.42	20.0	HHDT
Demolition	Onsite truck	1.00	1.65	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	8.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	1.00	1.24	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	6.00	10.2	HHDT,MHDT
Grading	Hauling	13.7	20.0	HHDT
Grading	Onsite truck	1.00	0.82	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	8.66	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	3.38	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.73	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	30,945	10,315	3,441

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	711	—
Site Preparation	—	—	7.50	0.00	—
Grading	—	650	6.00	0.00	—
Paving	0.00	0.00	0.00	0.00	1.89

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Elementary School	0.00	0%
Other Asphalt Surfaces	0.97	100%
Other Non-Asphalt Surfaces	0.92	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Elementary School	740	0.00	0.00	192,929	6,567	0.00	0.00	1,712,075
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Elementary School	740	0.00	0.00	192,929	6,567	0.00	0.00	1,712,075
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	30,945	10,315	3,441

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Elementary School	134,262	532	0.0330	0.0040	493,891
Other Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Elementary School	134,262	532	0.0330	0.0040	493,891
Other Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Elementary School	598,206	880,873
Other Asphalt Surfaces	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Elementary School	539,522	880,873
Other Asphalt Surfaces	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Elementary School	26.8	—
Other Asphalt Surfaces	0.00	—
Other Non-Asphalt Surfaces	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Elementary School	26.8	—
Other Asphalt Surfaces	0.00	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.5	annual days of extreme heat
Extreme Precipitation	2.30	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	6.30	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	97.0
AQ-PM	53.4
AQ-DPM	56.9
Drinking Water	17.3
Lead Risk Housing	34.4
Pesticides	66.9
Toxic Releases	31.5
Traffic	28.4
Effect Indicators	—
CleanUp Sites	71.6
Groundwater	0.00
Haz Waste Facilities/Generators	19.2
Impaired Water Bodies	0.00
Solid Waste	35.7
Sensitive Population	—
Asthma	64.6
Cardio-vascular	89.8
Low Birth Weights	71.0
Socioeconomic Factor Indicators	—
Education	81.1
Housing	79.9
Linguistic	43.9
Poverty	69.8
Unemployment	84.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	13.26831772
Employed	6.159373797
Median HI	22.3662261
Education	—
Bachelor's or higher	7.237264211
High school enrollment	100
Preschool enrollment	12.43423585
Transportation	—
Auto Access	68.11240857
Active commuting	29.86013089
Social	—
2-parent households	36.67393815
Voting	2.938534582
Neighborhood	—
Alcohol availability	75.8501219
Park access	25.68972154
Retail density	29.911459
Supermarket access	37.84165277
Tree canopy	2.361093289
Housing	—
Homeownership	49.49313486
Housing habitability	16.86128577
Low-inc homeowner severe housing cost burden	11.93378673
Low-inc renter severe housing cost burden	8.866931862
Uncrowded housing	24.38085461
Health Outcomes	—

Insured adults	4.953163095
Arthritis	65.9
Asthma ER Admissions	42.5
High Blood Pressure	49.4
Cancer (excluding skin)	93.3
Asthma	12.1
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	37.6
Diagnosed Diabetes	31.9
Life Expectancy at Birth	21.8
Cognitively Disabled	30.7
Physically Disabled	81.6
Heart Attack ER Admissions	7.4
Mental Health Not Good	12.4
Chronic Kidney Disease	45.1
Obesity	6.5
Pedestrian Injuries	19.6
Physical Health Not Good	18.5
Stroke	45.2
Health Risk Behaviors	—
Binge Drinking	55.6
Current Smoker	12.6
No Leisure Time for Physical Activity	13.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	41.8
Elderly	96.5

English Speaking	35.9
Foreign-born	68.2
Outdoor Workers	3.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	65.3
Traffic Density	25.1
Traffic Access	23.0
Other Indices	—
Hardship	93.5
Other Decision Support	—
2016 Voting	9.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	72.0
Healthy Places Index Score for Project Location (b)	7.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on provided information.
Construction: Construction Phases	Based on information provided and defaults.
Construction: Trips and VMT	Based on information demolition debris info provided.
Construction: Architectural Coatings	No landscaping included.
Operations: Vehicle Data	Based on trip gen data provided by project traffic consultant. See AQ/GHG appendix of the MND.
Operations: Architectural Coatings	No coating of landscaping.

PESD-02 Mitigated Construction Detailed Report

Table of Contents

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	PESD-02 Mitigated Construction
Construction Start Date	5/6/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	0.20
Location	625 Mildred St, Perris, CA 92570, USA
County	Riverside-South Coast
City	Perris
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5503
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Elementary School	20.6	1000sqft	0.47	20,630	25,000	25,000	—	—
Other Asphalt Surfaces	0.97	Acre	0.97	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	0.92	Acre	0.92	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Water	W-4	Require Low-Flow Water Fixtures

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.1	16.1	15.2	16.2	0.03	0.66	3.14	3.80	0.61	1.44	2.05	—	3,537	3,537	0.12	0.17	2.53	3,595
Mit.	16.1	16.1	10.7	15.8	0.03	0.41	3.14	3.21	0.37	1.44	1.50	—	3,537	3,537	0.12	0.17	2.53	3,595
% Reduced	—	—	29%	3%	—	39%	—	16%	39%	—	27%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.53	1.28	10.8	12.4	0.02	0.41	0.14	0.55	0.37	0.03	0.41	—	2,417	2,417	0.10	0.04	0.02	2,431
Mit.	1.53	1.28	10.8	12.4	0.02	0.41	0.14	0.55	0.37	0.03	0.41	—	2,417	2,417	0.10	0.04	0.02	2,431
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.05	0.97	5.38	6.11	0.01	0.21	0.18	0.38	0.19	0.05	0.24	—	1,209	1,209	0.05	0.02	0.19	1,218

Mit.	1.05	0.97	4.88	6.13	0.01	0.16	0.18	0.34	0.15	0.05	0.20	—	1,209	1,209	0.05	0.02	0.19	1,218
% Reduced	—	—	9%	> -0.5%	—	23%	—	12%	23%	—	18%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	0.18	0.98	1.11	< 0.005	0.04	0.03	0.07	0.03	0.01	0.04	—	200	200	0.01	< 0.005	0.03	202
Mit.	0.19	0.18	0.89	1.12	< 0.005	0.03	0.03	0.06	0.03	0.01	0.04	—	200	200	0.01	< 0.005	0.03	202
% Reduced	—	—	9%	> -0.5%	—	23%	—	12%	23%	—	18%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.89	1.57	15.2	16.2	0.03	0.66	3.14	3.80	0.61	1.44	2.05	—	3,537	3,537	0.12	0.17	2.53	3,595
2026	16.1	16.1	10.3	12.4	0.02	0.36	0.20	0.50	0.33	0.05	0.37	—	2,422	2,422	0.10	0.04	0.70	2,437
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.53	1.28	10.8	12.4	0.02	0.41	0.14	0.55	0.37	0.03	0.41	—	2,417	2,417	0.10	0.04	0.02	2,431
2026	1.46	1.22	10.3	12.3	0.02	0.36	0.14	0.50	0.33	0.03	0.37	—	2,413	2,413	0.09	0.04	0.02	2,426
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.74	0.62	5.38	6.11	0.01	0.21	0.18	0.38	0.19	0.05	0.24	—	1,209	1,209	0.05	0.02	0.19	1,218
2026	1.05	0.97	3.32	4.04	0.01	0.12	0.05	0.17	0.11	0.01	0.12	—	781	781	0.03	0.01	0.10	786
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.14	0.11	0.98	1.11	< 0.005	0.04	0.03	0.07	0.03	0.01	0.04	—	200	200	0.01	< 0.005	0.03	202
2026	0.19	0.18	0.61	0.74	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	129	129	< 0.005	< 0.005	0.02	130

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.54	1.28	10.7	15.8	0.03	0.41	3.14	3.21	0.37	1.44	1.50	—	3,537	3,537	0.12	0.17	2.53	3,595
2026	16.1	16.1	10.3	12.4	0.02	0.36	0.20	0.50	0.33	0.05	0.37	—	2,422	2,422	0.10	0.04	0.70	2,437
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.53	1.28	10.8	12.4	0.02	0.41	0.14	0.55	0.37	0.03	0.41	—	2,417	2,417	0.10	0.04	0.02	2,431
2026	1.46	1.22	10.3	12.3	0.02	0.36	0.14	0.50	0.33	0.03	0.37	—	2,413	2,413	0.09	0.04	0.02	2,426
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.62	0.52	4.88	6.13	0.01	0.16	0.18	0.34	0.15	0.05	0.20	—	1,209	1,209	0.05	0.02	0.19	1,218
2026	1.05	0.97	3.32	4.04	0.01	0.12	0.05	0.17	0.11	0.01	0.12	—	781	781	0.03	0.01	0.10	786
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.11	0.10	0.89	1.12	< 0.005	0.03	0.03	0.06	0.03	0.01	0.04	—	200	200	0.01	< 0.005	0.03	202
2026	0.19	0.18	0.61	0.74	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	129	129	< 0.005	< 0.005	0.02	130

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.75	1.47	13.9	15.1	0.02	0.57	—	0.57	0.52	—	0.52	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.64	0.64	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.92	0.99	< 0.005	0.04	—	0.04	0.03	—	0.03	—	164	164	0.01	< 0.005	—	165
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.1	27.1	< 0.005	< 0.005	—	27.2
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.97	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	176	176	0.01	0.01	0.65	179
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.57	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.05	—	511	511	0.01	0.08	1.09	536

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.6	33.6	< 0.005	0.01	0.03	35.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.57	5.57	< 0.005	< 0.005	0.01	5.83

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.47	8.42	14.7	0.02	0.09	—	0.09	0.08	—	0.08	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.64	0.64	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.55	0.96	< 0.005	0.01	—	0.01	0.01	—	0.01	—	164	164	0.01	< 0.005	—	165
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.1	27.1	< 0.005	< 0.005	—	27.2
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.97	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	176	176	0.01	0.01	0.65	179
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.57	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.05	—	511	511	0.01	0.08	1.09	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.6	33.6	< 0.005	0.01	0.03	35.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.57	5.57	< 0.005	< 0.005	0.01	5.83

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.19	10.9	11.0	0.03	0.47	—	0.47	0.43	—	0.43	—	2,717	2,717	0.11	0.02	—	2,726
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.2	37.2	< 0.005	< 0.005	—	37.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.16	6.16	< 0.005	< 0.005	—	6.18
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.58	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.39	107
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.35	1.35	< 0.005	< 0.005	< 0.005	1.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.34	7.95	15.0	0.03	0.05	—	0.05	0.05	—	0.05	—	2,717	2,717	0.11	0.02	—	2,726
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.11	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.2	37.2	< 0.005	< 0.005	—	37.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.16	6.16	< 0.005	< 0.005	—	6.18
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.58	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.39	107
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.35	1.35	< 0.005	< 0.005	< 0.005	1.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.80	1.51	14.1	14.5	0.02	0.64	—	0.64	0.59	—	0.59	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.23	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.4	40.4	< 0.005	< 0.005	—	40.5
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.68	6.68	< 0.005	< 0.005	—	6.70
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.77	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.02	1.04	0.26	0.01	0.02	0.25	0.27	0.02	0.07	0.09	—	942	942	0.02	0.15	2.01	988
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.5	15.5	< 0.005	< 0.005	0.01	16.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.56	2.56	< 0.005	< 0.005	< 0.005	2.69

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.32	7.70	14.2	0.02	0.05	—	0.05	0.05	—	0.05	—	2,455	2,455	0.10	0.02	—	2,463

Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.13	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40.4	40.4	< 0.005	< 0.005	—	40.5
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.68	6.68	< 0.005	< 0.005	—	6.70
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.77	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.02	1.04	0.26	0.01	0.02	0.25	0.27	0.02	0.07	0.09	—	942	942	0.02	0.15	2.01	988
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.5	15.5	< 0.005	< 0.005	0.01	16.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.56	2.56	< 0.005	< 0.005	< 0.005	2.69

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.46	3.96	4.43	0.01	0.15	—	0.15	0.14	—	0.14	—	823	823	0.03	0.01	—	826
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.72	0.81	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	137
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.67	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	122	122	0.01	< 0.005	0.45	124
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	103	103	< 0.005	0.02	0.29	108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.51	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	112	112	0.01	< 0.005	0.01	114
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	< 0.005	0.02	0.01	108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.5	42.5	< 0.005	< 0.005	0.07	43.1
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.7	38.7	< 0.005	0.01	0.05	40.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.04	7.04	< 0.005	< 0.005	0.01	7.13
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.40	6.40	< 0.005	< 0.005	0.01	6.70
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.56	0.46	3.96	4.43	0.01	0.15	—	0.15	0.14	—	0.14	—	823	823	0.03	0.01	—	826
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.72	0.81	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	137
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.67	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	122	122	0.01	< 0.005	0.45	124
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	103	103	< 0.005	0.02	0.29	108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.51	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	112	112	0.01	< 0.005	0.01	114
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	< 0.005	0.02	0.01	108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.5	42.5	< 0.005	< 0.005	0.07	43.1
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.7	38.7	< 0.005	0.01	0.05	40.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.04	7.04	< 0.005	< 0.005	0.01	7.13
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.40	6.40	< 0.005	< 0.005	0.01	6.70

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.07	3.57	0.01	0.11	—	0.11	0.10	—	0.10	—	668	668	0.03	0.01	—	670
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.08	0.07	0.56	0.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	111	111	< 0.005	< 0.005	—	111
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.62	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	119	119	0.01	< 0.005	0.40	121
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.02	0.28	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	110	110	< 0.005	< 0.005	0.01	111
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.02	0.01	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.8	33.8	< 0.005	< 0.005	0.05	34.2
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.9	30.9	< 0.005	< 0.005	0.04	32.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.59	5.59	< 0.005	< 0.005	0.01	5.66
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.11	5.11	< 0.005	< 0.005	0.01	5.36
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.07	3.57	0.01	0.11	—	0.11	0.10	—	0.10	—	668	668	0.03	0.01	—	670
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.56	0.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	111	111	< 0.005	< 0.005	—	111
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.62	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	119	119	0.01	< 0.005	0.40	121
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.02	0.28	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	110	110	< 0.005	< 0.005	0.01	111
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.02	0.01	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.8	33.8	< 0.005	< 0.005	0.05	34.2
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.9	30.9	< 0.005	< 0.005	0.04	32.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.59	5.59	< 0.005	< 0.005	0.01	5.66
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.11	5.11	< 0.005	< 0.005	0.01	5.36
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.79	0.67	5.88	8.19	0.01	0.25	—	0.25	0.23	—	0.23	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.5	37.5	< 0.005	< 0.005	—	37.6
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.20	6.20	< 0.005	< 0.005	—	6.23
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	1.08	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	207	207	0.01	0.01	0.70	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.81	5.81	< 0.005	< 0.005	0.01	5.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.96	0.96	< 0.005	< 0.005	< 0.005	0.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	0.67	5.88	8.19	0.01	0.25	—	0.25	0.23	—	0.23	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.18	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.5	37.5	< 0.005	< 0.005	—	37.6
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.20	6.20	< 0.005	< 0.005	—	6.23
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	1.08	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	207	207	0.01	0.01	0.70	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.81	5.81	< 0.005	< 0.005	0.01	5.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.96	0.96	< 0.005	< 0.005	< 0.005	0.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	15.9	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.75	4.75	< 0.005	< 0.005	—	4.77
Architectural Coatings	0.57	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.79	0.79	< 0.005	< 0.005	—	0.79
Architectural Coatings	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.9	23.9	< 0.005	< 0.005	0.08	24.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	15.9	15.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.75	4.75	< 0.005	< 0.005	—	4.77
Architectural Coatings	0.57	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.79	0.79	< 0.005	< 0.005	—	0.79

Architectural Coating	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.9	23.9	< 0.005	< 0.005	0.08	24.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetati	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	5/6/2025	6/6/2025	5.00	24.0	—
Site Preparation	Site Preparation	6/8/2025	6/13/2025	5.00	5.00	—
Grading	Grading	6/14/2025	6/23/2025	5.00	6.00	—
Building Construction	Building Construction	6/24/2025	6/4/2026	5.00	248	—
Paving	Paving	6/5/2026	6/21/2026	5.00	11.0	—
Architectural Coating	Architectural Coating	6/22/2026	7/8/2026	5.00	13.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41

Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Tier 4 Interim	1.00	8.00	423	0.48

Site Preparation	Tractors/Loaders/Back	Diesel	Tier 4 Interim	1.00	7.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Back hoes	Diesel	Tier 4 Interim	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	7.42	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—

Site Preparation	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	13.7	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	8.66	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	3.38	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.73	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—

Demolition	Worker	12.5	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	7.42	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	13.7	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	8.66	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	3.38	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.73	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	30,945	10,315	3,441

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	711	—
Site Preparation	—	—	7.50	0.00	—
Grading	—	650	6.00	0.00	—
Paving	0.00	0.00	0.00	0.00	1.89

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Elementary School	0.00	0%
Other Asphalt Surfaces	0.97	100%
Other Non-Asphalt Surfaces	0.92	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.5	annual days of extreme heat
Extreme Precipitation	2.30	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	6.30	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	97.0
AQ-PM	53.4
AQ-DPM	56.9
Drinking Water	17.3
Lead Risk Housing	34.4
Pesticides	66.9
Toxic Releases	31.5
Traffic	28.4
Effect Indicators	—
CleanUp Sites	71.6
Groundwater	0.00
Haz Waste Facilities/Generators	19.2
Impaired Water Bodies	0.00
Solid Waste	35.7
Sensitive Population	—
Asthma	64.6

Cardio-vascular	89.8
Low Birth Weights	71.0
Socioeconomic Factor Indicators	—
Education	81.1
Housing	79.9
Linguistic	43.9
Poverty	69.8
Unemployment	84.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	13.26831772
Employed	6.159373797
Median HI	22.3662261
Education	—
Bachelor's or higher	7.237264211
High school enrollment	100
Preschool enrollment	12.43423585
Transportation	—
Auto Access	68.11240857
Active commuting	29.86013089
Social	—
2-parent households	36.67393815
Voting	2.938534582
Neighborhood	—
Alcohol availability	75.8501219

Park access	25.68972154
Retail density	29.911459
Supermarket access	37.84165277
Tree canopy	2.361093289
Housing	—
Homeownership	49.49313486
Housing habitability	16.86128577
Low-inc homeowner severe housing cost burden	11.93378673
Low-inc renter severe housing cost burden	8.866931862
Uncrowded housing	24.38085461
Health Outcomes	—
Insured adults	4.953163095
Arthritis	65.9
Asthma ER Admissions	42.5
High Blood Pressure	49.4
Cancer (excluding skin)	93.3
Asthma	12.1
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	37.6
Diagnosed Diabetes	31.9
Life Expectancy at Birth	21.8
Cognitively Disabled	30.7
Physically Disabled	81.6
Heart Attack ER Admissions	7.4
Mental Health Not Good	12.4
Chronic Kidney Disease	45.1
Obesity	6.5
Pedestrian Injuries	19.6

Physical Health Not Good	18.5
Stroke	45.2
Health Risk Behaviors	—
Binge Drinking	55.6
Current Smoker	12.6
No Leisure Time for Physical Activity	13.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	41.8
Elderly	96.5
English Speaking	35.9
Foreign-born	68.2
Outdoor Workers	3.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	65.3
Traffic Density	25.1
Traffic Access	23.0
Other Indices	—
Hardship	93.5
Other Decision Support	—
2016 Voting	9.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	72.0
Healthy Places Index Score for Project Location (b)	7.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes

Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based on information provided and confirmed.
Construction: Architectural Coatings	New paved surfaces only. See AQ/GHG appendix of MND for details.
Operations: Vehicle Data	Based on trip generation data provided by project traffic consultant. See AQ/GHG appendix of MND for details.
Operations: Architectural Coatings	Paved surfaces only. See AQ/GHG appendix of the MND for details.

Construction Localized Significance Thresholds: Demolition

SRA No.	Acres	Source Receptor Distance (meters) *(NOx & CO)*	Source Receptor Distance (Feet) *(NOx & CO)*	Source Receptor Distance (meters) *(PM10 & PM2.5)*	Source Receptor Distance (Feet) *(PM10 & PM2.5)*	Construction / Project Site Size (Acres)
24	2.00	25	82	25	82	2.24

Source Receptor	**Perris Valley**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	8	3	1.5
NOx	**170**	Tractors	0.5	0.0625			0
CO	**883**	Graders	0.5	0.0625			0
PM10	**7.00**	Dozers	0.5	0.0625	8	1	0.5
PM2.5	**4.00**	Scrapers	1	0.125			0
						Acres	2.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	2	170	200	264	379	684
	2	170	200	264	379	684
		170	200	264	379	684
CO	2	883	1262	2232	5136	18947
	2	883	1262	2232	5136	18947
		883	1262	2232	5136	18947
PM10	2	7	20	38	75	186
	2	7	20	38	75	186
		7	20	38	75	186
PM2.5	2	4	6	10	23	91
	2	4	6	10	23	91
		4	6	10	23	91

Perris Valley

2.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	170	200	264	379	684
CO	883	1262	2232	5136	18947
PM10	7	20	38	75	186
PM2.5	4	6	10	23	91

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
24	2	24	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Site Preparation

SRA No.	Acres	NOx & CO: Source Receptor Distance (meters)	NOx & CO: Source Receptor Distance (Feet)	PM10 & PM2.5: Source Receptor Distance (meters)	PM10 & PM2.5: Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
24	2.00	25	82	25	82	2.24

Source Receptor	Perris Valley	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625			0
NOx	**170**	Tractors	0.5	0.0625	8	1	0.5
CO	**883**	Graders	0.5	0.0625	8	1	0.5
PM10	**7.00**	Dozers	0.5	0.0625			0
PM2.5	**4.00**	Scrapers	1	0.125	8	1	1
						Acres	2.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	2	170	200	264	379	684
	2	170	200	264	379	684
		170	200	264	379	684
CO	2	883	1262	2232	5136	18947
	2	883	1262	2232	5136	18947
		883	1262	2232	5136	18947
PM10	2	7	20	38	75	186
	2	7	20	38	75	186
		7	20	38	75	186
PM2.5	2	4	6	10	23	91
	2	4	6	10	23	91
		4	6	10	23	91

Perris Valley

2.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	170	200	264	379	684
CO	883	1262	2232	5136	18947
PM10	7	20	38	75	186
PM2.5	4	6	10	23	91

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
24	2	24	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Grading

SRA No.	Acres	NOx & CO Source Receptor Distance (meters)	NOx & CO Source Receptor Distance (Feet)	PM10 & PM2.5 Source Receptor Distance (meters)	PM10 & PM2.5 Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
24	1.88	25	82	25	82	2.24

Source Receptor	Perris Valley	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625			0
NOx	**163**	Tractors	0.5	0.0625	7	2	0.875
CO	**848**	Graders	0.5	0.0625	8	1	0.5
PM10	**6.62**	Dozers	0.5	0.0625	8	1	0.5
PM2.5	**3.87**	Scrapers	1	0.125			0
						Acres	1.88

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	2	170	200	264	379	684
		164	194	258	374	680
CO	1	602	887	1746	4359	17640
	2	883	1262	2232	5136	18947
		848	1215	2171	5039	18784
PM10	1	4	12	30	67	178
	2	7	20	38	75	186
		7	19	37	74	185
PM2.5	1	3	4	8	20	86
	2	4	6	10	23	91
		4	6	10	23	90

Perris Valley

1.88 Acres

	25	**50**	**100**	**200**	**500**
NOx	164	194	258	374	680
CO	848	1215	2171	5039	18784
PM10	7	19	37	74	185
PM2.5	4	6	10	23	90

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
24	1	24	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction

SRA No.	Acres	*NOx & CO* Source Receptor Distance (meters)	Source Receptor Distance (Feet)	*PM10 & PM2.5* Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
24	0.38	25	82	25	82	2.24

Source Receptor	Perris Valley	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625			0
NOx	**118**	Tractors	0.5	0.0625	6	1	0.375
CO	**602**	Graders	0.5	0.0625			0
PM10	**4.00**	Dozers	0.5	0.0625			0
PM2.5	**3.00**	Scrapers	1	0.125			0
						Acres	0.38

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	1	118	148	212	335	652
		118	148	212	335	652
CO	1	602	887	1746	4359	17640
	1	602	887	1746	4359	17640
		602	887	1746	4359	17640
PM10	1	4	12	30	67	178
	1	4	12	30	67	178
		4	12	30	67	178
PM2.5	1	3	4	8	20	86
	1	3	4	8	20	86
		3	4	8	20	86

Perris Valley

0.38 Acres

	25	**50**	**100**	**200**	**500**
NOx	118	148	212	335	652
CO	602	887	1746	4359	17640
PM10	4	12	30	67	178
PM2.5	3	4	8	20	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Asphalt Paving

SRA No.	Acres	NOx & CO Source Receptor Distance (meters)	Source Receptor Distance (Feet)	PM10 & PM2.5 Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
24	0.50	25	82	25	82	2.24

Source Receptor	Perris Valley	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625			0
NOx	**118**	Tractors	0.5	0.0625	8	1	0.5
CO	**602**	Graders	0.5	0.0625			0
PM10	**4.00**	Dozers	0.5	0.0625			0
PM2.5	**3.00**	Scrapers	1	0.125			0
						Acres	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	1	118	148	212	335	652
		118	148	212	335	652
CO	1	602	887	1746	4359	17640
	1	602	887	1746	4359	17640
		602	887	1746	4359	17640
PM10	1	4	12	30	67	178
	1	4	12	30	67	178
		4	12	30	67	178
PM2.5	1	3	4	8	20	86
	1	3	4	8	20	86
		3	4	8	20	86

Perris Valley

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	118	148	212	335	652
CO	602	887	1746	4359	17640
PM10	4	12	30	67	178
PM2.5	3	4	8	20	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Architectural Coating

SRA No.	Acres	Source Receptor Distance (meters) *NOx & CO*	Source Receptor Distance (Feet)	Source Receptor Distance (meters) *PM10 & PM2.5*	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
24	0.00	25	82	25	82	2.24

Source Receptor	Perris Valley	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625			0
NOx	**118**	Tractors	0.5	0.0625			0
CO	**602**	Graders	0.5	0.0625			0
PM10	**4.00**	Dozers	0.5	0.0625			0
PM2.5	**3.00**	Scrapers	1	0.125			0
						Acres	0.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	1	118	148	212	335	652
		118	148	212	335	652
CO	1	602	887	1746	4359	17640
	1	602	887	1746	4359	17640
		602	887	1746	4359	17640
PM10	1	4	12	30	67	178
	1	4	12	30	67	178
		4	12	30	67	178
PM2.5	1	3	4	8	20	86
	1	3	4	8	20	86
		3	4	8	20	86

Perris Valley

0.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	118	148	212	335	652
CO	602	887	1746	4359	17640
PM10	4	12	30	67	178
PM2.5	3	4	8	20	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Operation-Related Vehicle Fuel/Energy Usage

PROPOSED PROJECT (Buildout Year 2026)

Vehicle Type	Gas		Diesel		CNG		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	Gallons	VMT	kWh
Project-Related Vehicles	1,538,248	59,499	95,438	9,193	2,234	221	76,155	27,591
Total	**1,538,248**	**59,499**	**95,438**	**9,193**	**2,234**	**221**	**76,155**	**27,591**

Land Use Proposed Project Year 2026

Operational Land Use

Vehicle type	Fleet percent	VMT	
	Passenger Vehicles	Passenger Vehicles	Total
HHD	1.61%	27,610	27,610
LDA	49.62%	849,463	849,463
LDT1	3.80%	65,028	65,028
LDT2	20.49%	350,838	350,838
LHD1	3.14%	53,829	53,829
LHD2	0.90%	15,346	15,346
MCY	2.31%	39,582	39,582
MDV	15.83%	270,997	270,997
MH	0.60%	10,306	10,306
MHD	1.47%	25,094	25,094
OBUS	0.06%	1,031	1,031
SBUS	0.13%	2,290	2,290
UBUS	0.04%	662	662
	100.00%	1,712,075	1,712,075

PROPOSED CONDITIONS

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent	
LDA	92.28%	0.20%	0.00%	7.52%	
LDT1	99.40%	0.02%	0.00%	0.59%	
LDT2	98.18%	0.34%	0.00%	1.48%	
MDV	96.74%	1.45%	0.00%	1.81%	
LHD1	53.76%	44.68%	0.00%	1.56%	
LHD2	25.78%	72.87%	0.00%	1.35%	
MHD	7.67%	89.32%	1.28%	1.74%	<< Equal to T6 (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
HHD	0.01%	96.33%	2.67%	0.98%	<< Equal to T7 (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
OBUS	39.48%	51.86%	7.90%	0.76%	<< Motor coach, all other buses, and OBUS (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
UBUS	37.29%	0.06%	62.55%	0.10%	
MCY	100.00%	0.00%	0.00%	0.00%	
SBUS	44.44%	25.23%	29.69%	0.64%	
MH	68.73%	31.27%	0.00%	0.00%	

PROPOSED CONDITIONS

Vehicle type	Gasoline			Diesel			CNG			Electricity		
	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	m/kWh	kWh
LDA	783,862	30.90	25,368	1,730	43.71	40	0	0.00	0	63,872	2.73	23,413
LDT1	64,635	25.55	2,530	11	24.74	0	0	0.00	0	382	2.82	136
LDT2	344,443	25.60	13,455	1,186	34.44	34	0	0.00	0	5,208	2.89	1,802
MDV	262,150	20.45	12,818	3,931	24.47	161	0	0.00	0	4,916	2.80	1,757
LHD1	28,938	14.27	2,028	24,051	20.77	1,158	0	0.00	0	840	1.78	0
LHD2	3,956	12.63	313	11,183	17.33	645	0	0.00	0	207	1.78	0
MHD	1,923	5.35	360	22,413	9.04	2,480	320	8.85	0	437	0.00	0
HHD	4	3.94	1	26,597	6.30	4,221	738	6.20	119	270	0.56	484
OBUS	407	5.23	78	535	8.41	64	81	10.14	0	8	0.00	0
UBUS	247	5.71	43	0	11.26	0	414	4.06	102	1	0.50	0
MCY	39,582	42.07	941	0	0.00	0	0	0.00	0	0	0.00	0
SBUS	1,018	8.78	116	578	7.36	79	680	4.21	0	15	0.86	0
MH	7,083	4.89	1,448	3,223	10.35	311	0	0.00	0	0	0.00	0
	1,538,248		**59,499**	**95,438**		**9,193**	**2,234**		**221**	**76,155**		**27,591**

EMFAC Fuel Usage: Year 2026

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	9,977	1,018	9.80	2,322	229	10.14	0	0	0.00
LDA	20,691,882	669,639	30.90	45,657	1,044	43.71	0	0	0.00	1,686,043	618,028	2.73
LDT1	1,478,165	57,851	25.55	246	10	24.74	0	0	0.00	8,735	3,101	2.82
LDT2	9,242,699	361,044	25.60	31,822	924	34.44	0	0	0.00	139,759	48,343	2.89
LHD1	648,259	45,432	14.27	538,771	25,946	20.77	0	0	0.00	18,823	10,594	1.78
LHD2	87,078	6,895	12.63	246,179	14,209	17.33	0	0	0.00	4,563	2,570	1.78
MCY	137,143	3,260	42.07	0	0	0.00	0	0	0.00	0	0	0.00
MDV	6,460,183	315,883	20.45	96,875	3,959	24.47	0	0	0.00	121,140	43,300	2.80
MH	36,312	7,426	4.89	16,521	1,596	10.35	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	5,257	912	5.76	0	0	0.00	0	0	0.00
OBUS	11,598	2,216	5.23	0	0	0.00	0	0	0.00	222	235	0.94
PTO	0	0	0.00	48,893	9,616	5.08	0	0	0.00	1,164	2,412	0.48
SBUS	16,958	1,930	8.78	9,627	1,309	7.36	11,330	2,692	4.21	246	284	0.86
T6	49,535	9,264	5.35	577,214	63,871	9.04	8,249	932	8.85	11,242	11,835	0.95
T7	270	68	3.94	1,939,561	307,815	6.30	53,853	8,684	6.20	19,690	35,329	0.56
UBUS	18,581	3,253	5.71	30	3	11.26	31,172	7,683	4.06	49	99	0.50
Total	**38,878,660**	**1,484,162**	**26.20**	**3,566,629**	**432,232**	**8.25**	**106,926**	**20,221**	**5.29**	**2,011,676**	**776,131**	**2.59**

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
Riverside (SC)	2026	All Other Buses	Aggregate	Aggregate	Diesel	189.363508	9976.89238	9976.89238	0	1685.335221	1.018180951	0
Riverside (SC)	2026	All Other Buses	Aggregate	Aggregate	Natural Gas	39.09901647	2321.721637	2321.721637	0	347.9812466	0.229040331	0
Riverside (SC)	2026	LDA	Aggregate	Aggregate	Gasoline	470220.2179	20338993.18	20338993.18	0	2185331.163	657.9019755	0
Riverside (SC)	2026	LDA	Aggregate	Aggregate	Diesel	1278.903087	45656.81459	45656.81459	0	5545.999289	1.04446634	0
Riverside (SC)	2026	LDA	Aggregate	Aggregate	Electricity	27110.24505	1294343.513	0	1294343.513	135099.14	0	499723.424
Riverside (SC)	2026	LDA	Aggregate	Aggregate	Plug-in Hybrid	15111.22646	744588.2646	352889.0075	391699.257	62484.92143	11.73727955	118304.8501
Riverside (SC)	2026	LDT1	Aggregate	Aggregate	Gasoline	39097.73904	1475770.596	1475770.596	0	169714.1852	57.77065353	0
Riverside (SC)	2026	LDT1	Aggregate	Aggregate	Diesel	13.62192751	246.3725383	246.3725383	0	37.88513027	0.009960174	0
Riverside (SC)	2026	LDT1	Aggregate	Aggregate	Electricity	113.2552136	5510.233656	0	5510.233656	566.2242098	0	2127.404976
Riverside (SC)	2026	LDT1	Aggregate	Aggregate	Plug-in Hybrid	101.686721	5618.828531	2393.923488	3224.905043	420.4745914	0.079905828	974.0174404
Riverside (SC)	2026	LDT2	Aggregate	Aggregate	Gasoline	207104.2919	9189016.153	9189016.153	0	971544.954	359.2463978	0
Riverside (SC)	2026	LDT2	Aggregate	Aggregate	Diesel	682.5626595	31821.71127	31821.71127	0	3275.224859	0.923868936	0
Riverside (SC)	2026	LDT2	Aggregate	Aggregate	Electricity	2094.273367	72949.08151	0	72949.08151	10611.729	0	28164.36628
Riverside (SC)	2026	LDT2	Aggregate	Aggregate	Plug-in Hybrid	2291.195555	120492.7893	53682.5287	66810.26064	9474.09362	1.797659677	20178.68998
Riverside (SC)	2026	LHD1	Aggregate	Aggregate	Gasoline	17398.34216	648258.6134	648258.6134	0	259209.3746	45.43230342	0
Riverside (SC)	2026	LHD1	Aggregate	Aggregate	Diesel	14868.32038	538771.2685	538771.2685	0	187024.766	25.94580105	0
Riverside (SC)	2026	LHD1	Aggregate	Aggregate	Electricity	286.9935654	18822.70429	0	18822.70429	4016.687077	0	10594.16768
Riverside (SC)	2026	LHD2	Aggregate	Aggregate	Gasoline	2430.034218	87077.56554	87077.56554	0	36203.8891	6.894650038	0
Riverside (SC)	2026	LHD2	Aggregate	Aggregate	Diesel	6777.719033	246178.6334	246178.6334	0	85255.17906	14.20940258	0
Riverside (SC)	2026	LHD2	Aggregate	Aggregate	Electricity	73.06243174	4562.903373	0	4562.903373	969.1961533	0	2570.446676
Riverside (SC)	2026	MCY	Aggregate	Aggregate	Gasoline	23937.33086	137142.5787	137142.5787	0	47874.66172	3.259850983	0
Riverside (SC)	2026	MDV	Aggregate	Aggregate	Gasoline	157654.7501	6425602.492	6425602.492	0	721133.3463	314.7102388	0
Riverside (SC)	2026	MDV	Aggregate	Aggregate	Diesel	2395.180805	96875.32958	96875.32958	0	10973.88872	3.958815392	0
Riverside (SC)	2026	MDV	Aggregate	Aggregate	Electricity	2298.450518	79855.22944	0	79855.22944	11636.40874	0	30830.70937
Riverside (SC)	2026	MDV	Aggregate	Aggregate	Plug-in Hybrid	1539.714974	75864.84529	34580.25026	41284.59503	6366.721417	1.172888712	12469.17818
Riverside (SC)	2026	MH	Aggregate	Aggregate	Gasoline	4250.734566	36312.00617	36312.00617	0	425.243486	7.425870006	0
Riverside (SC)	2026	MH	Aggregate	Aggregate	Diesel	1981.725027	16521.21606	16521.21606	0	198.1725027	1.595663475	0
Riverside (SC)	2026	Motor Coach	Aggregate	Aggregate	Diesel	40.72833655	5256.765418	5256.765418	0	935.937174	0.91212623	0
Riverside (SC)	2026	OBUS	Aggregate	Aggregate	Gasoline	350.9276772	11597.74291	11597.74291	0	7021.360966	2.216471452	0
Riverside (SC)	2026	OBUS	Aggregate	Aggregate	Electricity	3.398598414	222.0634986	0	222.0634986	67.99915706	0	235.1538582
Riverside (SC)	2026	PTO	Aggregate	Aggregate	Diesel	0	48892.54833	48892.54833	0	0	9.616496127	0
Riverside (SC)	2026	PTO	Aggregate	Aggregate	Electricity	0	1164.418083	0	1164.418083	0	0	2412.113913
Riverside (SC)	2026	SBUS	Aggregate	Aggregate	Gasoline	428.6165302	16957.83533	16957.83533	0	1714.466121	1.930418011	0
Riverside (SC)	2026	SBUS	Aggregate	Aggregate	Diesel	474.8674611	9627.108018	9627.108018	0	6876.080837	1.308586985	0
Riverside (SC)	2026	SBUS	Aggregate	Aggregate	Electricity	8.960082283	245.5300912	0	245.5300912	112.7096016	0	283.9067741
Riverside (SC)	2026	SBUS	Aggregate	Aggregate	Natural Gas	472.4302591	11329.69641	11329.69641	0	6840.790152	2.69210511	0
Riverside (SC)	2026	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	4.545063428	303.8300751	303.8300751	0	104.4455576	0.0325429	0
Riverside (SC)	2026	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.100913569	8.290875694	0	8.290875694	2.31899382	0	8.766858255
Riverside (SC)	2026	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	5.97788529	417.85402	417.85402	0	137.371804	0.044816592	0
Riverside (SC)	2026	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.117786748	10.3197978	0	10.3197978	2.706739461	0	10.91226161
Riverside (SC)	2026	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	20.86474475	1081.161332	1081.161332	0	479.4718343	0.114167403	0
Riverside (SC)	2026	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	0.64265176	37.66910424	0	37.66910424	14.76813746	0	39.8317029
Riverside (SC)	2026	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	33.90776784	6886.169617	6886.169617	0	779.2005049	0.672097963	0
Riverside (SC)	2026	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	0.586350754	126.1744328	0	126.1744328	13.47434033	0	133.4181585
Riverside (SC)	2026	T6 CAIRP Class 7	Aggregate	Aggregate	Natural Gas	0.028251682	5.525962142	5.525962142	0	0.649223656	0.000523937	0
Riverside (SC)	2026	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	467.8934326	15736.93867	15736.93867	0	6676.839283	1.753087891	0
Riverside (SC)	2026	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	7.186858383	293.0781513	0	293.0781513	102.5564691	0	308.070084
Riverside (SC)	2026	T6 Instate Delivery Class 4	Aggregate	Aggregate	Natural Gas	1.994095657	71.3173012	71.3173012	0	28.45574503	0.008105707	0
Riverside (SC)	2026	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	446.9600888	15093.09907	15093.09907	0	6378.120467	1.699161423	0
Riverside (SC)	2026	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	6.34750542	260.1629373	0	260.1629373	90.57890235	0	273.4711461
Riverside (SC)	2026	T6 Instate Delivery Class 5	Aggregate	Aggregate	Natural Gas	1.636840788	59.039586	59.039586	0	23.35771805	0.006662968	0
Riverside (SC)	2026	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	1294.097362	43582.20135	43582.20135	0	18466.76935	4.819772094	0
Riverside (SC)	2026	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	18.98368949	772.0768695	0	772.0768695	270.897249	0	811.5711969
Riverside (SC)	2026	T6 Instate Delivery Class 6	Aggregate	Aggregate	Natural Gas	5.469529518	194.3477459	194.3477459	0	78.05018622	0.022070766	0
Riverside (SC)	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	188.7341584	10015.58702	10015.58702	0	2693.23644	1.06924367	0
Riverside (SC)	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	1.230913511	61.77918911	0	61.77918911	17.5651358	0	64.93940232
Riverside (SC)	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	5.157700914	276.4428627	276.4428627	0	73.60039204	0.030690343	0
Riverside (SC)	2026	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1592.946355	66522.69891	66522.69891	0	18414.45986	7.440758175	0
Riverside (SC)	2026	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	25.50706613	1229.603001	0	1229.603001	294.8616845	0	1294.148772
Riverside (SC)	2026	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	6.149289528	270.2276205	270.2276205	0	71.08578694	0.030450641	0
Riverside (SC)	2026	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	3929.819594	168580.003	168580.003	0	45428.71451	18.97825868	0
Riverside (SC)	2026	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	57.62245322	2780.726698	0	2780.726698	666.1155592	0	2926.695885
Riverside (SC)	2026	T6 Instate Other Class 5	Aggregate	Aggregate	Natural Gas	12.75963212	569.0001661	569.0001661	0	147.5013473	0.062949139	0
Riverside (SC)	2026	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	2783.131833	117706.5084	117706.5084	0	32173.00399	13.10501282	0
Riverside (SC)	2026	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	44.35411627	2107.116261	0	2107.116261	512.7335841	0	2217.725494
Riverside (SC)	2026	T6 Instate Other Class 6	Aggregate	Aggregate	Natural Gas	9.940320772	435.80412	435.80412	0	114.9101081	0.048625325	0
Riverside (SC)	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	1377.66889	61427.16568	61427.16568	0	15925.85237	6.689278638	0
Riverside (SC)	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	15.72581542	1102.753899	0	1102.753899	181.7904262	0	1160.640958
Riverside (SC)	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	38.8846502	1737.681284	1737.681284	0	449.5065563	0.196532711	0
Riverside (SC)	2026	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	18.01475106	878.3986301	878.3986301	0	208.2505222	0.095419998	0
Riverside (SC)	2026	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.334653518	22.82724789	0	22.82724789	3.86859467	0	24.02552272
Riverside (SC)	2026	T6 Instate Tractor Class 6	Aggregate	Aggregate	Natural Gas	0.061134164	3.255876885	3.255876885	0	0.706710931	0.000356527	0
Riverside (SC)	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	472.9605604	26969.62668	26969.62668	0	5467.424078	2.746106205	0
Riverside (SC)	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	2.967217133	248.2957225	0	248.2957225	34.30103006	0	261.3295545
Riverside (SC)	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	12.71039094	736.540909	736.540909	0	146.9321192	0.080928708	0
Riverside (SC)	2026	T6 OOS Class 4	Aggregate	Aggregate	Diesel	2.710153526	180.0491932	180.0491932	0	62.27932802	0.018923719	0
Riverside (SC)	2026	T6 OOS Class 5	Aggregate	Aggregate	Diesel	3.545686608	246.9951159	246.9951159	0	81.47987825	0.02603485	0
Riverside (SC)	2026	T6 OOS Class 6	Aggregate	Aggregate	Diesel	12.50157034	645.4053045	645.4053045	0	287.2860865	0.066553994	0
Riverside (SC)	2026	T6 OOS Class 7	Aggregate	Aggregate	Diesel	18.37435476	4692.899118	4692.899118	0	422.2426723	0.453153367	0
Riverside (SC)	2026	T6 Public Class 4	Aggregate	Aggregate	Diesel	75.01266542	2612.192029	2612.192029	0	384.8149736	0.299056584	0
Riverside (SC)	2026	T6 Public Class 4	Aggregate	Aggregate	Electricity	1.345590136	58.04358149	0	58.04358149	6.902877395	0	61.26453636
Riverside (SC)	2026	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	6.586220487	274.4867514	274.4867514	0	33.7873111	0.031810417	0
Riverside (SC)	2026	T6 Public Class 5	Aggregate	Aggregate	Diesel	120.6345364	4344.225219	4344.225219	0	618.8551716	0.505425564	0
Riverside (SC)	2026	T6 Public Class 5	Aggregate	Aggregate	Electricity	1.99821944	86.06115636	0	86.06115636	10.25086573	0	90.8368627
Riverside (SC)	2026	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	24.20700106	962.7097288	962.7097288	0	124.1819154	0.112664896	0
Riverside (SC)	2026	T6 Public Class 6	Aggregate	Aggregate	Diesel	168.6100175	5988.435434	5988.435434	0	864.9693896	0.683231182	0
Riverside (SC)	2026	T6 Public Class 6	Aggregate	Aggregate	Electricity	3.5507345	146.1830848	0	146.1830848	18.21526799	0	154.2950777
Riverside (SC)	2026	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	20.13071165	832.2919722	832.2919722	0	103.2705508	0.096492552	0
Riverside (SC)	2026	T6 Public Class 7	Aggregate	Aggregate	Diesel	278.7092037	12683.10044	12683.10044	0	1429.778215	1.42686549	0
Riverside (SC)	2026	T6 Public Class 7	Aggregate	Aggregate	Electricity	5.310014493	337.1276213	0	337.1276213	27.24037435	0	355.8355098
Riverside (SC)	2026	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	33.29015071	1747.345252	1747.345252	0	170.7784731	0.195691599	0

Riverside (SC)	2026	T6 Utility Class 5	Aggregate	Aggregate	Diesel	181.3701616	7329.174556	7329.174556	0	2321.538069	0.78337598	0
Riverside (SC)	2026	T6 Utility Class 5	Aggregate	Aggregate	Electricity	5.35386032	232.2985485	0	232.2985485	68.5294121	0	245.1892613
Riverside (SC)	2026	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	1.059706736	42.27734961	42.27734961	0	13.56424622	0.004527987	0
Riverside (SC)	2026	T6 Utility Class 6	Aggregate	Aggregate	Diesel	34.26197075	1379.976087	1379.976087	0	438.5532256	0.146932072	0
Riverside (SC)	2026	T6 Utility Class 6	Aggregate	Aggregate	Electricity	1.021986247	44.3442794	0	44.3442794	13.08142397	0	46.80503249
Riverside (SC)	2026	T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.327680207	12.63454942	12.63454942	0	4.19430665	0.001359618	0
Riverside (SC)	2026	T6 Utility Class 7	Aggregate	Aggregate	Diesel	38.39365749	1910.063659	1910.063659	0	491.4388159	0.202079776	0
Riverside (SC)	2026	T6 Utility Class 7	Aggregate	Aggregate	Electricity	1.165098857	70.8264169	0	70.8264169	14.91326537	0	74.75671696
Riverside (SC)	2026	T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.420184155	18.39153544	18.39153544	0	5.378357186	0.001951126	0
Riverside (SC)	2026	T6TS	Aggregate	Aggregate	Gasoline	1204.155669	49534.83957	49534.83957	0	24092.74663	9.263997368	0
Riverside (SC)	2026	T6TS	Aggregate	Aggregate	Electricity	17.60952272	1206.057194	0	1206.057194	352.3313306	0	1270.037785
Riverside (SC)	2026	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	1900.327832	393302.9697	393302.9697	0	43669.53357	61.60068373	0
Riverside (SC)	2026	T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	41.35565057	8446.758935	0	8446.758935	950.35285	0	15161.24577
Riverside (SC)	2026	T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	7.622339164	1560.826996	1560.826996	0	175.161354	0.265578678	0
Riverside (SC)	2026	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	1731.287544	477598.2562	477598.2562	0	39784.98777	72.04575741	0
Riverside (SC)	2026	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	736.7682567	173416.4175	173416.4175	0	16930.93454	26.92782964	0
Riverside (SC)	2026	T7 POLA Class 8	Aggregate	Aggregate	Diesel	2463.682481	314986.3083	314986.3083	0	40305.84539	52.67896915	0
Riverside (SC)	2026	T7 POLA Class 8	Aggregate	Aggregate	Electricity	8.88920687	998.6006615	0	998.6006615	145.4274244	0	1789.574759
Riverside (SC)	2026	T7 POLA Class 8	Aggregate	Aggregate	Natural Gas	27.51401265	3491.621359	3491.621359	0	450.1292469	0.582368042	0
Riverside (SC)	2026	T7 Public Class 8	Aggregate	Aggregate	Diesel	599.7043156	24256.06027	24256.06027	0	3076.483139	4.132068443	0
Riverside (SC)	2026	T7 Public Class 8	Aggregate	Aggregate	Electricity	10.29929163	656.708181	0	656.708181	52.83536605	0	1178.175697
Riverside (SC)	2026	T7 Public Class 8	Aggregate	Aggregate	Natural Gas	227.9441159	11394.34389	11394.34389	0	1169.353315	1.783493434	0
Riverside (SC)	2026	T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Diesel	1265.856179	86656.81285	86656.81285	0	11924.36521	14.03482966	0
Riverside (SC)	2026	T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Electricity	39.79083578	3139.09596	0	3139.09596	374.8296731	0	5634.755413
Riverside (SC)	2026	T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Natural Gas	95.5361156	6727.726996	6727.726996	0	899.950209	1.058906845	0
Riverside (SC)	2026	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	1203.81084	68315.39925	68315.39925	0	11339.89811	11.43173338	0
Riverside (SC)	2026	T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	16.92833731	1366.945458	0	1366.945458	159.4649375	0	2453.701134
Riverside (SC)	2026	T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	91.21232888	5547.140523	5547.140523	0	859.2201381	0.936449206	0
Riverside (SC)	2026	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1300.692228	73303.37224	73303.37224	0	12252.52078	12.08779458	0
Riverside (SC)	2026	T7 Single Other Class 8	Aggregate	Aggregate	Electricity	18.02436094	1358.200797	0	1358.200797	169.78948	0	2438.004251
Riverside (SC)	2026	T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	94.9220624	5682.194348	5682.194348	0	894.1658278	0.939122908	0
Riverside (SC)	2026	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	41.33517057	2683.190874	2683.190874	0	190.1417846	0.992116176	0
Riverside (SC)	2026	T7 SWCV Class 8	Aggregate	Aggregate	Electricity	2.413754253	151.1368076	0	151.1368076	11.10326957	0	271.1854067
Riverside (SC)	2026	T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	138.2915695	8951.577233	8951.577233	0	636.1412196	1.298579148	0
Riverside (SC)	2026	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	4309.459038	319129.5753	319129.5753	0	62616.43982	50.93210196	0
Riverside (SC)	2026	T7 Tractor Class 8	Aggregate	Aggregate	Electricity	41.87777682	3477.761791	0	3477.761791	608.4840972	0	6231.551128
Riverside (SC)	2026	T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	139.9432917	10497.85997	10497.85997	0	2033.376028	1.819183129	0
Riverside (SC)	2026	T7 Utility Class 8	Aggregate	Aggregate	Diesel	134.8643814	5912.192026	5912.192026	0	1726.264082	0.95080062	0
Riverside (SC)	2026	T7 Utility Class 8	Aggregate	Aggregate	Electricity	1.46093297	91.82337134	0	91.82337134	18.69994201	0	164.7368918
Riverside (SC)	2026	T7IS	Aggregate	Aggregate	Gasoline	5.301713201	269.8155783	269.8155783	0	106.0766777	0.068469804	0
Riverside (SC)	2026	T7IS	Aggregate	Aggregate	Electricity	0.015515282	3.346833903	0	3.346833903	0.31042977	0	5.988620919
Riverside (SC)	2026	UBUS	Aggregate	Aggregate	Gasoline	146.7792196	18580.60009	18580.60009	0	587.1168784	3.25315693	0
Riverside (SC)	2026	UBUS	Aggregate	Aggregate	Diesel	0.3117338	30.10971099	30.10971099	0	1.246935201	0.002675115	0
Riverside (SC)	2026	UBUS	Aggregate	Aggregate	Electricity	0.298524289	49.15190367	0	49.15190367	1.194097158	0	99.2906368
Riverside (SC)	2026	UBUS	Aggregate	Aggregate	Natural Gas	252.9741581	31172.31474	31172.31474	0	1011.896632	7.683424013	0

Appendix

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Appendix B Health Risk Assessment Background and Modeling Data

Appendix

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1. Construction Health Risk Assessment

1.1 INTRODUCTION

The proposed project would construct a new two-story classroom building and expand an existing school campus building in addition to making other school campus improvements at Sky View Elementary School in the City of Perris, Riverside County, California. The project site is bounded by the open space to the west, Murrieta Road to the east, Mildred Street to the north, and water channel to the south. The following provides the background methodology used for the construction health risk assessment for the proposed project.

Project construction is anticipated to take place starting in May 2025 and be completed July 2026 (approximately 307 workdays or 1.18 years). The nearest offsite sensitive receptors to the project site are the surrounding single-family residences and the students of Sky View ES. Guidance from the California Environmental Protection Agency (Cal/EPA), Office of Environmental Health Hazard Assessment (OEHHA), and California Air Pollution Control Officers Association (CAPCOA) recommend the completion of health risk assessments to determine the impacts of hazardous air emissions upon sensitive receptors in the vicinity of the project. As a result, a site-specific construction health risk assessment (HRA) has been prepared for the proposed project. This HRA considers the health impact to nearby receptors (i.e., residents and students) from construction emissions of diesel equipment exhaust (diesel particulate matter or DPM) at the project site and truck haul route.

1.2 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

For this HRA, the South Coast Air Quality Management District (South Coast AQMD) significance thresholds were deemed to be appropriate and the thresholds that were used for this project are shown below:

- Excess cancer risk of more than 10 in a million
- Non-cancer hazard index (chronic or acute) greater than 1.0

The methodology used in this HRA is consistent with the following OEHHA guidance documents:

- OEHHA. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments.* February 2015.

Potential exposures to DPM from proposed project construction were evaluated for off-site receptors in close proximity to the site. Pollutant concentrations were estimated using an air dispersion model, and excess lifetime cancer risks and chronic non-cancer hazard indexes were calculated. These risks were then compared to the significance thresholds adopted for this HRA.

It should be noted that these health impacts are based on conservative (i.e., health protective) assumptions. The United States Environmental Protection Agency (USEPA, 2005) and OEHHA note that conservative assumptions used in a risk assessment are intended to ensure that the estimated risks do not underestimate the actual risks. Therefore, the estimated risks may not necessarily represent actual risks experienced by populations at or near a site. The use of conservative assumptions tends to produce upper-bound estimates of exposure and thus risk.

For residential-based receptors, the following conservative assumptions were used:

- It was assumed that maximum-exposed residential receptors (both children and adults) stood outdoors and are subject to DPM at their residence for 8 hours per day, and approximately 260 construction days per year. In reality, California residents typically will spend on average 2 hours per day outdoors at their residences (USEPA, 2011), so actual exposures and risks would be significantly lower than those calculated in this HRA.

- The calculated risk for infants from third trimester to age 2 is multiplied by a factor of 10 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA, 2015).

For students, the following conservative assumptions were used:

- It was assumed that maximum exposed student receptors at a school stood outside and are subject to DPM for 8 hours per weekday and approximately 180 construction days per year.

1.3 CONSTRUCTION EMISSIONS

Construction emissions were calculated as average daily emissions in pounds per day, using the proposed construction schedule and the latest version of California Emissions Estimation Model, known as CalEEMod Version 2022.1. DPM emissions were based on the CalEEMod construction runs, using annual exhaust PM_{10} construction emissions presented in pounds (lbs) per day.

The project was assumed to take place over approximately 14 months (307 workdays) from May 2025 to July 2026. The average daily emission rates from construction equipment used during the proposed project were determined by dividing the annual average emissions for each construction year by the number of construction days in that particular calendar year (i.e., 2025 and 2026). The off-site hauling emission rates were adjusted to evaluate localized emissions from the 0.45-mile haul route within 1,000 feet of the project site. The CalEEMod construction emissions output and emission rate calculations are provided in Appendix A of the HRA.

1.4 DISPERSION MODELING

Air quality modeling was performed using the AERMOD atmospheric dispersion model to assess the impact of emitted compounds on sensitive receptors near the project. The model is a steady state Gaussian plume model and is an approved model by South Coast AQMD for estimating ground level impacts from point and fugitive sources in simple and complex terrain. The on-site construction emissions for the project were modeled as poly-area sources. The off-site mobile sources were modeled as adjacent line volume sources. The model requires additional input parameters, including chemical emission data and local meteorology. Inputs for the construction emission rates are those described in Section 1.3. Meteorological data obtained from the South Coast AQMD for the nearest representative meteorological station (PERI Site) with the five latest available years (2016 through 2020) of record were used to represent local weather conditions and prevailing winds (South Coast AQMD, 2024).

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. To accommodate the model's Cartesian grid format, direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. In addition, digital elevation model (DEM) data for the area were obtained and included in the model runs to account for complex terrain. An emission release height of 4.15 meters was used as representative of the stack exhaust height for off-road construction equipment and diesel truck traffic (CARB, 2000).

To determine contaminant impacts during construction hours, the model's Season-Hour-Day (HRDOW) scalar option was invoked to predict flagpole-level concentrations (0 meter for ground floor receptors) for construction emissions generated between the hours of 7:00 AM and 4:00 PM with a 1-hour lunch break.

A unit emission rate of 1 gram per second was used for all modeling runs. The unit emission rates were proportioned over the poly-area sources for on-site construction emissions and divided between the volume sources for off-site hauling emissions. The maximum modeled concentrations from the output files were then multiplied by the emission rates calculated in Appendix A to obtain the maximum flagpole-level concentrations at the off-site maximum exposed individual resident (MEIR) in addition to students at Sky View Elementary School. The air dispersion modeling predicted the off-site MEIR is the single-family residence in the northeast corner of the intersection of Hollowood Court and Mildred Street.[1]

The receptor locations are presented in Figure 1. The air dispersion model output is presented in Appendix B. The DPM concentrations at the MEIR in addition to Sky View Elementary School are provided in Appendix C.

1.5 RISK CHARACTERIZATION

1.5.1 Carcinogenic Chemical Risk

A threshold of ten in a million ($10x10^{-6}$) has been established as a level posing no significant risk for exposures to carcinogens. Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The cancer risk probability is determined by multiplying the chemical's annual concentration by its cancer potency factor (CPF), a measure of the carcinogenic potential of a chemical when a dose is received through

[1] The MEIR or MEIW location is the receptor location associated with the maximum predicted AERMOD concentrations from off-road equipment (i.e., on-site emissions). The calculated on-site emission rates are approximately 3 to 4 orders of magnitude higher than the calculated off-site (hauling) emission rates (see Appendix A). Therefore, the maximum concentrations associated with the on-site emission sources produce the highest overall ground-level MEIR concentrations and, consequently, highest calculated health risks.

the inhalation pathway. It is an upper-limit estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu g/m^3$) over a lifetime of 70 years.

Recent guidance from OEHHA recommends a refinement to the standard point estimate approach with the use of age-specific breathing rates and age sensitivity factors (ASFs) to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, to accommodate the unique exposures associated with the sensitive receptors, the following dose algorithm was used.

$$\mathrm{Dose}_{\mathrm{AIR,per\ age\ group}} = (\mathrm{C}_{\mathrm{air}} \times \mathrm{EF} \times [\frac{\mathrm{BR}}{\mathrm{BW}}] \times \mathrm{A} \times \mathrm{CF})$$

Where:

$\mathrm{Dose}_{\mathrm{AIR}}$	=	dose by inhalation (mg/kg-day), per age group
C_{air}	=	concentration of contaminant in air ($\mu g/m^3$)
EF	=	exposure frequency (number of days/365 days)
BR/BW	=	daily breathing rate normalized to body weight (L/kg-day)
A	=	inhalation absorption factor (default = 1)
CF	=	conversion factor ($1x10^{-6}$, µg to mg, L to m^3)

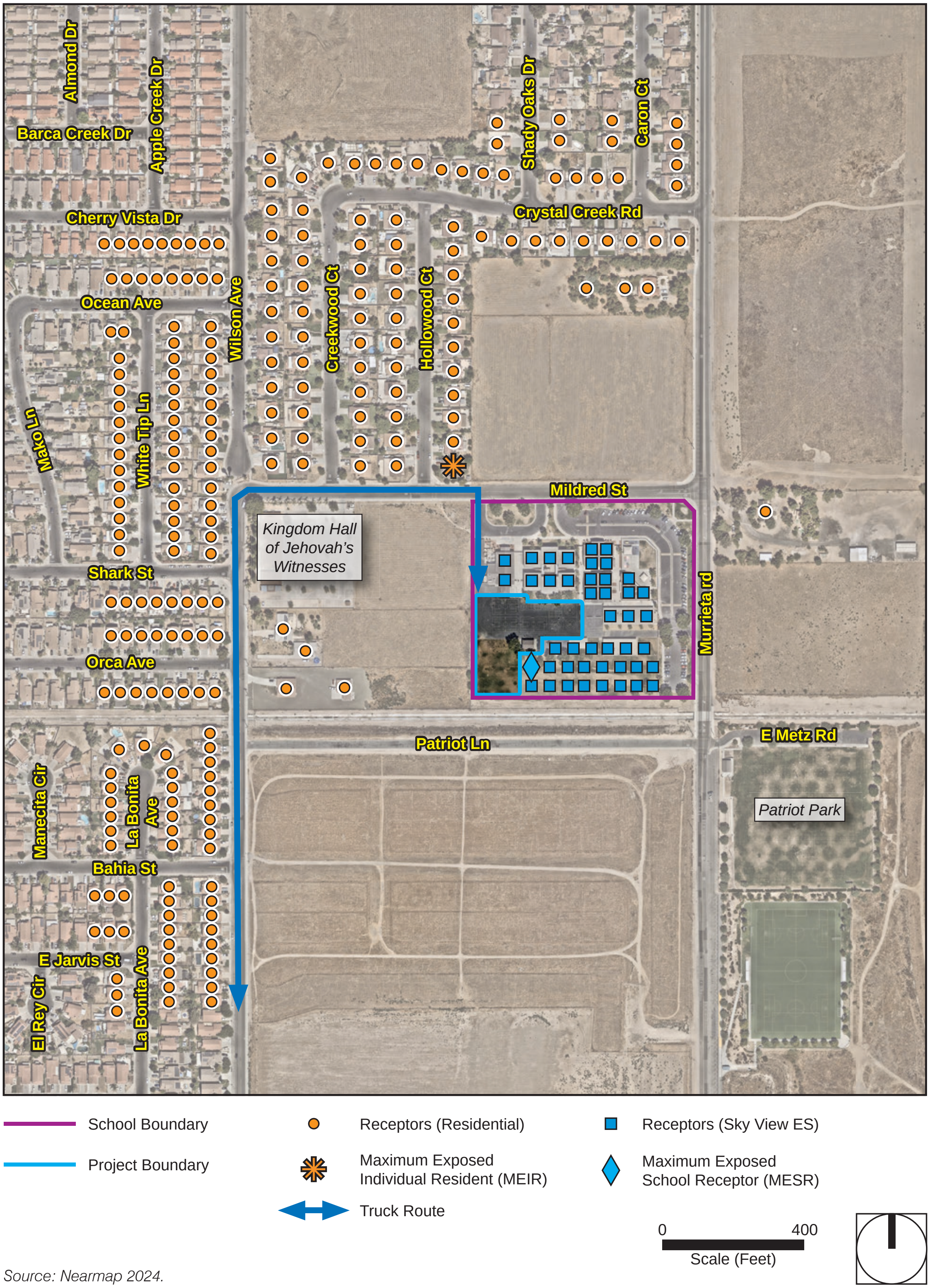
The inhalation absorption factor (A) is a unitless factor that is only used if the cancer potency factor included a correction for absorption across the lung. The default value of 1 was used for this assessment. For residential receptors, the exposure frequency (EF) of 0.96 is used to represent 350 days per year to allow for a two-week period away from home each year (OEHHA, 2015).

For construction analysis, the exposure duration spans the length of construction (e.g., 307 workdays, approximately 1.18 years). As the length of construction is shorter than 2.25 years, the third trimester and 0-2 age bins apply to the construction analysis for the off-site residential receptors. For residential receptors, the 95th percentile daily breathing rates (BR/BW), exposure duration (ED), age sensitivity factors (ASFs), and fraction of time at home (FAH) for the various age groups are provided herein:

Age Groups	BR/BW (L/kg-day)	ED	ASF	FAH
Third trimester	361	0.25	10	0.85
0-2 age group	1,090	0.93	10	0.85

For student receptors, the 2-9 age bin was applied for student receptors Sky View Elementary School. The 95th percentile daily breathing rates (BR/BW), exposure duration (ED), age sensitivity factors (ASFs), and fraction of time at home (FAH) for the 2-9 age bin are provided herein:

Figure 1 - Project Sources and Off-Site Receptor Locations



Source: Nearmap 2024.

PlaceWorks

Age Groups	BR/BW (L/kg-day)	ED	ASF	FAH
2-9 age group	640	1.18	3	n/a

To calculate the overall cancer risk, the risk for each appropriate age group is calculated per the following equation:

$$\text{Cancer Risk}_{\text{AIR}} = \text{Dose}_{\text{AIR}} \times \text{CPF} \times \text{ASF} \times \text{FAH} \times \frac{\text{ED}}{AT}$$

Where:

Dose_{AIR}	=	dose by inhalation (mg/kg-day), per age group
CPF	=	cancer potency factor, chemical-specific $(\text{mg/kg-day})^{-1}$
ASF	=	age sensitivity factor, per age group
FAH	=	fraction of time at home, per age group (for residential receptors only)
ED	=	exposure duration (years)
AT	=	averaging time period over which exposure duration is averaged (70 years)

The CPFs used in the assessment were obtained from OEHHA guidance. The excess lifetime cancer risks during the construction period to the maximally exposed resident were calculated based on the factors provided above. The cancer risks for each age group are summed to estimate the total cancer risk for each toxic chemical species. The final step converts the cancer risk in scientific notation to a whole number that expresses the cancer risk in "chances per million" by multiplying the cancer risk by a factor of 1×10^6 (i.e., 1 million). The calculated results are provided in Appendix C.

1.5.2 Non-Carcinogenic Hazards

An evaluation was also conducted of the potential non-cancer effects of chronic chemical exposures. Adverse health effects are evaluated by comparing the annual receptor level (flagpole) concentration of each chemical compound with the appropriate reference exposure limit (REL). Available RELs promulgated by OEHHA were considered in the assessment.

The hazard index approach was used to quantify non-carcinogenic impacts. The hazard index assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). Target organs presented in regulatory guidance were used for each discrete chemical exposure. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity value. This ratio is summed for compounds affecting the same toxicological endpoint. A health hazard is presumed to exist where the total equals or exceeds one.

The chronic hazard analysis for DPM is provided in Appendix C. The calculations contain the relevant exposure concentrations and corresponding reference dose values used in the evaluation of non-carcinogenic exposures.

1.6 CONSTRUCTION HRA RESULTS

The calculated results are provided in Appendix C and the results are summarized in Table 1.

TABLE 1. CONSTRUCTION RISK SUMMARY - UNMITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards
Maximum Exposed Individual Resident (MEIR)	3.3	0.01
Maximum Exposed Individual Student (MEIS) – Sky View Elementary School (Indoors)	5.4	0.13
Maximum Exposed Individual Student (MEIS) – Sky View Elementary School (Outdoors)	10.3	0.24
South Coast AQMD Threshold	10	1.0
Exceeds Threshold?	Yes	No

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

Cancer risk for the MEIR from project-related construction emissions was calculated to be 3.3 in a million, which would not exceed the 10 in a million significance threshold. In accordance with the latest 2015 OEHHA guidance, the calculated total cancer risk conservatively assumes that the risk for the MEIR consists of a pregnant woman in the third trimester that subsequently gives birth to an infant during the approximately 1.18-year construction period; therefore, calculated risk values for the 1.18 years were multiplied by a factor of 10. In addition, it was conservatively assumed that the residents were outdoors 8 hours a day and exposed to all of the daily construction emissions.

Cancer risk for the maximum exposed individual student (MEIS) at Sky View ES for construction activities related to the proposed project was calculated to be 10.3 in a million, which would exceed the 10 in a million significance threshold. This cancer risk level of 10.3 in a million is conservatively based on a student receptor outdoors for 8 hours a day, 180 construction days per year, and exposed to all of the daily construction emissions. In general, students would be indoors for most of the school day and would not be situated in the area with the highest concentrations, which would be the northwestern portion of the existing grass playfield. For comparison, the cancer risk for a student in the building that is within the highest pollution concentration area (existing westernmost building) would be 5.4 in a million. For noncarcinogenic effects, the chronic hazard index identified for each toxicological endpoint totaled less than one for all the off-site residential and onsite student receptors. Therefore, chronic noncarcinogenic hazards are within acceptable limits.

Because cancer risk at the outdoor MEIS would exceed the South Coast AQMD significance threshold due to construction activities associated with the proposed project, the following mitigation measure is proposed:

> **Mitigation Measure AQ-1:** The Perris Elementary School District (District) shall specify in the construction bid that the project construction contractor(s) and subcontractor(s) comply with the following requirements for all diesel-powered off-road equipment greater than 50 horsepower:
>
> - Have engines that meet the United States Environmental Protection Agency Tier 4 Interim emission standards unless it can be demonstrated to the District that such

equipment is not commercially available. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier 4 Interim engines similar to the availability for other large-scale construction projects in the region at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction and (ii) geographic proximity to the project site of Tier 4 Interim equipment. Where such equipment is not commercially available, as demonstrated by the construction contractor, Tier 3 equipment retrofitted with a California Air Resources Board's Level 3 Verified Diesel Emissions Control Strategy (VDECS) shall be used.

- Maintain a list of all operating equipment in use on the project site for verification by the District official or his/her designee. The construction equipment list shall state the makes, models, Engine Family Number, Equipment Identification Number, and number of construction equipment on-site.
- Ensure that all equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.
- Ensure that all construction plans submitted to the District clearly show the selected emission reduction strategy for construction equipment over 50 horsepower.

As shown in Table 2, with incorporation of Mitigation Measure AQ-1, cancer risk levels for the outdoor MEIS would be reduced to below the cancer risk significance threshold of 10 in a million. Therefore, the proposed project would not expose sensitive receptors to substantial concentrations of TAC emissions during construction and project-related construction health risk impacts would be less than significant with incorporation of mitigation.

TABLE 2. CONSTRUCTION RISK SUMMARY - MITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards
Maximum Exposed Individual Resident (MEIR)	2.8	0.01
Maximum Exposed Individual Student (MEIS) – Sky View Elementary School (Indoors)	4.6	0.11
Maximum Exposed Individual Student (MEIS) – Sky View Elementary School (Outdoors)	8.8	0.21
South Coast AQMD Threshold	10	1.0
Exceeds Threshold?	No	No

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.
Modeling includes Mitigation Measure AQ-1, which requires that all diesel-powered off-road construction equipment greater than 50 HP used for demolition, site preparation, and grading activities meet the Tier 4 Interim emissions standards

2. References

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California Air Resources Board (CARB). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.*

Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments.* Dated February 2015.

———. 2004. *Guidance for School Site Risk Assessment Pursuant to Health and Safety Code Section 901(f): Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites.* Dated February 2004.

South Coast Air Quality Management District (South Coast AQMD). 2024. December 3 (accessed). Health Risk Assessment Tool and AERMOD-Ready Meteorological Data Files. https://www.aqmd.gov/assets/aermet/AERMET_files_And_HRA_Tool.html.

United States Environmental Protection Agency (USEPA). 2011. *Exposure Factors Handbook 2011 Edition (Final).* EPA/600/R-09/052F, 2011.

______. 2005. *Guideline on Air Quality Models* (Revised). EPA-450/2-78-027R.

Appendix A. Emission Rate Calculations

Average Daily Emissions and Emission Rates: Unmitigated

Year	Start Date	End Date	Workdays
2025	5/6/2025	12/31/2025	172
2026	1/1/2026	7/8/2026	135

Year	Start Date	End Date	Workdays
2025	1/1/2025	12/31/2025	261
2026	1/1/2026	12/31/2026	261

Onsite Construction PM10 Exhaust Emissions[1]

Phases	Year	Annual PM10 Exhaust Emissions (Tons/Year)	Annual PM10 Exhaust Emissions (lbs/Year)	# of Construction Days/Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)	# of Total Workdays/ Year	Construction Duration (Yr)[2]
	2025	0.0375	75.04	172	0.44	5.45E-02	6.87E-03	261	0.66
	2026	0.0215	42.93	135	0.32	3.97E-02	5.01E-03	261	0.52
				307					**1.18**

Offsite Construction PM10 Exhaust Emissions[1]

Year	Annual PM10 Exhaust Emissions (Tons/Year)	Annual PM10 Exhaust Emissions (lbs/Year)	# of Construction Days/Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000 ft (lbs/day) [3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
2025	0.0003	0.61	172	3.53E-03	7.87E-05	9.83E-06	1.24E-06
2026	0.0001	0.17	135	1.25E-03	2.78E-05	3.47E-06	4.38E-07

Note: Emissions evenly distributed over 246 modeled volume sources.

Hauling Length (miles)	20	miles
Haul Length within 1,000 ft of Site (mile) [3]	0.45	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [4]	8	hours

[1] DPM emissions taken as PM_{10} exhaust emissions from CalEEMod annual emissions.

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

[3] Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances, are adjusted to evaluate emissions from the **0.45-**mile route within 1,000 of the project site.

[4] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App B - Air Dispersion Model Output Files).

Annual Construction Emissions

Asphalt Demolition							
		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**						
Off-Road Equipment		0.006823414		0.006823414	0.00627754		0.00627754
Demolition			0.007677192	0.007677192		0.001162546	0.001162546
Onsite truck		1.30955E-06	0.016314881	0.01631619	1.30955E-06	0.001629285	0.001630595
Total		**6.82E-03**	**2.40E-02**	**3.08E-02**	**6.28E-03**	**2.79E-03**	**9.07E-03**
Offsite							
Worker		0	0.001960389	0.001960389	0	0.000459508	0.000459508
Vendor		1.07938E-05	0.00020532	0.000216113	1.07938E-05	5.67268E-05	6.75207E-05
Hauling		0.000117727	0.001610655	0.001728382	0.000117727	0.000451717	0.000569444
Total		**1.29E-04**	**3.78E-03**	**3.90E-03**	**1.29E-04**	**9.68E-04**	**1.10E-03**
TOTAL		***0.0070***	***0.0278***	***0.0347***	***0.0064***	***0.0038***	***0.0102***

Site Preparation							
		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**						
Off-Road Equipment		0.001180449		0.001180449	0.001086013		0.001086013
)ust From Material Movement			0.001550982	0.001550982		0.00016747	0.00016747
Onsite truck		2.05E-07	0.0025492	0.002549405	2.05E-07	0.000254576	0.00025478
Total		**1.18E-03**	**4.10E-03**	**5.28E-03**	**1.09E-03**	**4.22E-04**	**1.51E-03**
Offsite							
Worker		0	0.000245049	0.000245049	0	5.74385E-05	5.74385E-05
Vendor		8.99486E-06	0.0001711	0.000180095	8.99486E-06	4.72723E-05	5.62672E-05
Hauling		0	0	0	0	0	0
Total		**8.99E-06**	**4.16E-04**	**4.25E-04**	**8.99E-06**	**1.05E-04**	**1.14E-04**
TOTAL		***0.0012***	***0.0045***	***0.0057***	***0.0011***	***0.0005***	***0.0016***

Rough Grading							
		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**						
Off-Road Equipment		0.001929384		0.001929384	0.001775033		0.001775033
)ust From Material Movement			0.008293309	0.008293309		0.004007954	0.004007954
Onsite truck		1.64E-07	0.00203936	0.002039524	1.64E-07	0.000203661	0.000203824
Total		**1.93E-03**	**1.03E-02**	**1.23E-02**	**1.78E-03**	**4.21E-03**	**5.99E-03**
Offsite							
Worker		0	0.000392078	0.000392078	0	9.19016E-05	9.19016E-05
Vendor		8.09537E-06	0.00015399	0.000162085	8.09537E-06	4.25451E-05	5.06405E-05
Hauling		5.42337E-05	0.000741987	0.000796221	5.42337E-05	0.000208094	0.000262328
Total		**6.23E-05**	**1.29E-03**	**1.35E-03**	**6.23E-05**	**3.43E-04**	**4.05E-04**
TOTAL		***0.0020***	***0.0116***	***0.0136***	***0.0018***	***0.0046***	***0.0064***

Building Construction

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**						
Off-Road Equipment		0.027585359		0.027585359	0.02537853		0.02537853
Onsite truck		0	0	0	0	0	0
Total		**0.027585359**	**0.00E+00**	**0.027585359**	**0.02537853**	**0**	**0.02537853**
Offsite							
Worker		0	0.00772458	0.00772458	0	0.001810614	0.001810614
Vendor		0.000103733	0.001973207	0.002076941	0.000103733	0.000545168	0.000648902
Hauling		0	0	0	0	0	0
Total		**1.04E-04**	**9.70E-03**	**9.80E-03**	**1.04E-04**	**2.36E-03**	**2.46E-03**
TOTAL		***0.0277***	***0.0097***	***0.0374***	***0.0255***	***0.0024***	***0.0278***

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2026**						
Off-Road Equipment		0.019949829		0.019949829	0.018353843		0.018353843
Onsite truck		0	0	0	0	0	0
Total		**0.019949829**	**0**	**0.019949829**	**0.018353843**	**0**	**0.018353843**
Offsite							
Worker		0	0.006268638	0.006268638	0	0.001469346	0.001469346
Vendor		8.41814E-05	0.001601294	0.001685475	8.41814E-05	0.000442414	0.000526596
Hauling		0	0	0	0	0	0
Total		**8.42E-05**	**7.87E-03**	**7.95E-03**	**8.42E-05**	**1.91E-03**	**2.00E-03**
TOTAL		***0.0200***	***0.0079***	***0.0279***	***0.0184***	***0.0019***	***0.0203***

Paving

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2026**						
Off-Road Equipment		0.001363885		0.001363885	0.001254774		0.001254774
Paving							
Onsite truck		0	0	0	0	0	0
Total		**1.36E-03**	**0.00E+00**	**1.36E-03**	**1.25E-03**	**0.00E+00**	**1.25E-03**
Offsite							
Worker		0	0.001078214	0.001078214	0	0.000252729	0.000252729
Vendor		0	0	0	0	0	0
Hauling		0	0	0	0	0	0
Total		**0.00E+00**	**1.08E-03**	**1.08E-03**	**0.00E+00**	**2.53E-04**	**2.53E-04**
TOTAL		***0.0014***	***0.0011***	***0.0024***	***0.0013***	***0.0003***	***0.0015***

Architectural Coating

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2026**						
Off-Road Equipment		0.000150497		0.000150497	0.000138457		0.000138457
Architectural Coatings							
Onsite truck		0	0	0	0	0	0
Total		**1.50E-04**	**0.00E+00**	**1.50E-04**	**1.38E-04**	**0.00E+00**	**1.38E-04**
Offsite							
Worker		0	0.000147212	0.000147212	0	3.45059E-05	3.45059E-05
Vendor		0	0	0	0	0	0
Hauling		0	0	0	0	0	0
Total		**0.00E+00**	**1.47E-04**	**1.47E-04**	**0.00E+00**	**3.45E-05**	**3.45E-05**
TOTAL		***0.0002***	***0.0001***	***0.0003***	***0.0001***	***0.0000***	***0.0002***

Average Daily Emissions and Emission Rates: Mitigated

Year	Start Date	End Date	Workdays
2025	5/6/2025	12/31/2025	172
2026	1/1/2026	7/8/2026	135

Year	Start Date	End Date	Workdays
2025	1/1/2025	12/31/2025	261
2026	1/1/2026	12/31/2026	261

Onsite Construction PM10 Exhaust Emissions[1]

Phases	Year	Annual PM10 Exhaust Emissions (Tons/Year)	Annual PM10 Exhaust Emissions (lbs/Year)	# of Construction Days/Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)	# of Total Workdays/ Year	Construction Duration (Yr)[2]
	2025	0.0289	57.75	172	0.34	4.20E-02	5.29E-03	261	0.66
	2026	0.0215	42.93	135	0.32	3.97E-02	5.01E-03	261	0.52
				307					**1.18**

Offsite Construction PM10 Exhaust Emissions[1]

Year	Annual PM10 Exhaust Emissions (Tons/Year)	Annual PM10 Exhaust Emissions (lbs/Year)	# of Construction Days/Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000 ft (lbs/day) [3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
2025	0.0003	0.59	172	3.40E-03	7.59E-05	9.48E-06	1.19E-06
2026	0.0001	0.17	135	1.25E-03	2.78E-05	3.47E-06	4.38E-07

Note: Emissions evenly distributed over 246 modeled volume sources.

Hauling Length (miles)	20	miles
Haul Length within 1,000 ft of Site (mile) [3]	0.45	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [4]	8	hours

[1] DPM emissions taken as PM_{10} exhaust emissions from CalEEMod annual emissions.

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

[3] Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances, are adjusted to evaluate emissions from the **0.45-**mile route within 1,000 of the project site.

[4] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App B - Air Dispersion Model Output Files).

Annual Construction Emissions

Asphalt Demolition

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**						
Off-Road Equipment		0.001020934		0.001020934	0.000979901		0.000979901
Demolition			0.007677192	0.007677192		0.001162546	0.001162546
Onsite truck		0	0	0	0	0	0
Total		**1.02E-03**	**7.68E-03**	**8.70E-03**	**9.80E-04**	**1.16E-03**	**2.14E-03**

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Offsite							
Worker		0	0.001960389	0.001960389	0	0.000459508	0.000459508
Vendor		0	0	0	0	0	0
Hauling		0.000117727	0.001610655	0.001728382	0.000117727	0.000451717	0.000569444
Total		**1.18E-04**	**3.57E-03**	**3.69E-03**	**1.18E-04**	**9.11E-04**	**1.03E-03**
TOTAL		***0.0011***	***0.0112***	***0.0124***	***0.0011***	***0.0021***	***0.0032***

Site Preparation

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**						
Off-Road Equipment		0.000128272		0.000128272	0.000128272		0.000128272
Dust From Material Movement			0.001550982	0.001550982		0.00016747	0.00016747
Onsite truck		0	0	0	0	0	0
Total		**1.28E-04**	**1.55E-03**	**1.68E-03**	**1.28E-04**	**1.67E-04**	**2.96E-04**
Offsite							
Worker		0	0.000245049	0.000245049	0	5.74385E-05	5.74385E-05
Vendor		8.99486E-06	0.0001711	0.000180095	8.99486E-06	4.72723E-05	5.62672E-05
Hauling		0	0	0	0	0	0
Total		**8.99E-06**	**4.16E-04**	**4.25E-04**	**8.99E-06**	**1.05E-04**	**1.14E-04**
TOTAL		***0.0001***	***0.0020***	***0.0021***	***0.0001***	***0.0003***	***0.0004***

Rough Grading

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**						
Off-Road Equipment		0.000138558		0.000138558	0.000138558		0.000138558
Dust From Material Movement			0.008293309	0.008293309		0.004007954	0.004007954
Onsite truck		0	0	0	0	0	0
Total		**1.39E-04**	**8.29E-03**	**8.43E-03**	**1.39E-04**	**4.01E-03**	**4.15E-03**
Offsite							
Worker		0	0.000392078	0.000392078	0	9.19016E-05	9.19016E-05
Vendor		8.09537E-06	0.00015399	0.000162085	8.09537E-06	4.25451E-05	5.06405E-05
Hauling		5.42337E-05	0.000741987	0.000796221	5.42337E-05	0.000208094	0.000262328
Total		**6.23E-05**	**1.29E-03**	**1.35E-03**	**6.23E-05**	**3.43E-04**	**4.05E-04**
TOTAL		***0.0002***	***0.0096***	***0.0098***	***0.0002***	***0.0044***	***0.0046***

Building Construction

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2025**						
Off-Road Equipment		0.027585359		0.027585359	0.02537853		0.02537853
Onsite truck		0	0	0	0	0	0
Total		**0.027585359**	**0.00E+00**	**0.027585359**	**0.02537853**	**0**	**0.02537853**

Offsite							
Worker		0	0.00772458	0.00772458	0	0.001810614	0.001810614
Vendor		0.000103733	0.001973207	0.002076941	0.000103733	0.000545168	0.000648902
Hauling		0	0	0	0	0	0
Total		**1.04E-04**	**9.70E-03**	**9.80E-03**	**1.04E-04**	**2.36E-03**	**2.46E-03**
TOTAL		***0.0277***	***0.0097***	***0.0374***	***0.0255***	***0.0024***	***0.0278***

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2026**						
Off-Road Equipment		0.019949829		0.019949829	0.018353843		0.018353843
Onsite truck		0	0	0	0	0	0
Total		**0.019949829**	**0**	**0.019949829**	**0.018353843**	**0**	**0.018353843**
Offsite							
Worker		0	0.006268638	0.006268638	0	0.001469346	0.001469346
Vendor		8.41814E-05	0.001601294	0.001685475	8.41814E-05	0.000442414	0.000526596
Hauling		0	0	0	0	0	0
Total		**8.42E-05**	**7.87E-03**	**7.95E-03**	**8.42E-05**	**1.91E-03**	**2.00E-03**
TOTAL		***0.0200***	***0.0079***	***0.0279***	***0.0184***	***0.0019***	***0.0203***

Paving

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2026**						
Off-Road Equipment		0.001363885		0.001363885	0.001254774		0.001254774
Paving							
Onsite truck		0	0	0	0	0	0
Total		**1.36E-03**	**0.00E+00**	**1.36E-03**	**1.25E-03**	**0.00E+00**	**1.25E-03**
Offsite							
Worker		0	0.001078214	0.001078214	0	0.000252729	0.000252729
Vendor		0	0	0	0	0	0
Hauling		0	0	0	0	0	0
Total		**0.00E+00**	**1.08E-03**	**1.08E-03**	**0.00E+00**	**2.53E-04**	**2.53E-04**
TOTAL		***0.0014***	***0.0011***	***0.0024***	***0.0013***	***0.0003***	***0.0015***

Architectural Coating

		Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	**2026**						
Off-Road Equipment		0.000150497		0.000150497	0.000138457		0.000138457
Architectural Coatings							
Onsite truck		0	0	0	0	0	0
Total		**1.50E-04**	**0.00E+00**	**1.50E-04**	**1.38E-04**	**0.00E+00**	**1.38E-04**
Offsite							
Worker		0	0.000147212	0.000147212	0	3.45059E-05	3.45059E-05
Vendor		0	0	0	0	0	0
Hauling		0	0	0	0	0	0
Total		**0.00E+00**	**1.47E-04**	**1.47E-04**	**0.00E+00**	**3.45E-05**	**3.45E-05**
TOTAL		***0.0002***	***0.0001***	***0.0003***	***0.0001***	***0.0000***	***0.0002***

Appendix B. Air Dispersion Model Output

```
*** AERMOD - VERSION 23132  ***   *** Construction HRA                                                   ***        11/23/24
*** AERMET - VERSION  22112 ***   *** Sky View Elementary School Expansion Project                       ***        16:36:15
                                                                                                                    PAGE   1
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  URBAN  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

** Model Options Selected:
     * Model Allows User-Specified Options
     * Model Is Setup For Calculation of Average CONCentration Values.
     * NO GAS DEPOSITION Data Provided.
     * NO PARTICLE DEPOSITION Data Provided.
     * Model Uses NO DRY DEPLETION. DDPLETE  =  F
     * Model Uses NO WET DEPLETION. WETDPLT  =  F
     * Stack-tip Downwash.
     * Allow FLAT/ELEV Terrain Option by Source,
       with      0 FLAT and     61 ELEV Source(s).
     * Use Calms Processing Routine.
     * Use Missing Data Processing Routine.
     * No Exponential Decay.
     * Model Uses URBAN Dispersion Algorithm for the SBL for    61 Source(s),
       for Total of    1 Urban Area(s):
  Urban Population =   2492442.0 ;  Urban Roughness Length =  1.000 m
     * Urban Roughness Length of 1.0 Meter Used.
     * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
     * CCVR_Sub - Meteorological data includes CCVR substitutions
     * TEMP_Sub - Meteorological data includes TEMP substitutions
     * Model Accepts FLAGPOLE Receptor . Heights.
     * The User Specified a Pollutant Type of: OTHER

**Model Calculates PERIOD Averages Only

**This Run Includes:     61 Source(s);       3 Source Group(s); and    1920 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:     60 VOLUME source(s)
                and:      1 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 RLINE/RLINEXT source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                and:      0 SWPOINT source(s)


**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date:  22112

**Output Options Selected:
```

```
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   442.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      3.9 MB of RAM.

**Input Runstream File:          aermod.inp
**Output Print File:             aermod.out

**Detailed Error/Message File:   PESD-02.err
**File for Summary of Results:   PESD-02.sum
```

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
L0000001	0	0.16667E-01	480487.7	3739443.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000002	0	0.16667E-01	480487.7	3739455.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000003	0	0.16667E-01	480487.7	3739467.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000004	0	0.16667E-01	480487.7	3739479.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000005	0	0.16667E-01	480487.7	3739491.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000006	0	0.16667E-01	480487.7	3739503.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000007	0	0.16667E-01	480487.7	3739515.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000008	0	0.16667E-01	480483.4	3739522.9	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000009	0	0.16667E-01	480471.4	3739522.9	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000010	0	0.16667E-01	480459.4	3739522.8	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000011	0	0.16667E-01	480447.4	3739522.7	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000012	0	0.16667E-01	480435.4	3739522.7	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000013	0	0.16667E-01	480423.4	3739522.6	432.2	4.15	5.58	1.93	YES	HRDOW	NO
L0000014	0	0.16667E-01	480411.4	3739522.5	432.6	4.15	5.58	1.93	YES	HRDOW	NO
L0000015	0	0.16667E-01	480399.4	3739522.5	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000016	0	0.16667E-01	480387.4	3739522.4	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000017	0	0.16667E-01	480375.4	3739522.4	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000018	0	0.16667E-01	480363.4	3739522.3	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000019	0	0.16667E-01	480351.4	3739522.2	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000020	0	0.16667E-01	480339.4	3739522.2	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000021	0	0.16667E-01	480327.4	3739522.1	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000022	0	0.16667E-01	480315.4	3739522.1	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000023	0	0.16667E-01	480303.4	3739522.0	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000024	0	0.16667E-01	480291.4	3739521.9	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000025	0	0.16667E-01	480279.4	3739521.9	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000026	0	0.16667E-01	480278.5	3739510.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000027	0	0.16667E-01	480278.4	3739498.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000028	0	0.16667E-01	480278.4	3739486.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000029	0	0.16667E-01	480278.4	3739474.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000030	0	0.16667E-01	480278.3	3739462.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000031	0	0.16667E-01	480278.3	3739450.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000032	0	0.16667E-01	480278.2	3739438.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000033	0	0.16667E-01	480278.2	3739426.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000034	0	0.16667E-01	480278.2	3739414.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000035	0	0.16667E-01	480278.1	3739402.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000036	0	0.16667E-01	480278.1	3739390.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000037	0	0.16667E-01	480278.1	3739378.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000038	0	0.16667E-01	480278.0	3739366.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO

L0000039	0	0.16667E-01	480278.0	3739354.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000040	0	0.16667E-01	480277.9	3739342.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
L0000041	0	0.16667E-01	480277.9	3739330.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000042	0	0.16667E-01	480277.9	3739318.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000043	0	0.16667E-01	480277.8	3739306.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000044	0	0.16667E-01	480277.8	3739294.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000045	0	0.16667E-01	480277.8	3739282.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000046	0	0.16667E-01	480277.7	3739270.7	432.8	4.15	5.58	1.93	YES	HRDOW	NO
L0000047	0	0.16667E-01	480277.7	3739258.7	432.5	4.15	5.58	1.93	YES	HRDOW	NO
L0000048	0	0.16667E-01	480277.6	3739246.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000049	0	0.16667E-01	480277.6	3739234.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000050	0	0.16667E-01	480277.6	3739222.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000051	0	0.16667E-01	480277.5	3739210.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000052	0	0.16667E-01	480277.5	3739198.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000053	0	0.16667E-01	480277.5	3739186.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000054	0	0.16667E-01	480277.4	3739174.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000055	0	0.16667E-01	480277.4	3739162.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000056	0	0.16667E-01	480277.4	3739150.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000057	0	0.16667E-01	480277.3	3739138.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000058	0	0.16667E-01	480277.3	3739126.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000059	0	0.16667E-01	480277.2	3739114.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000060	0	0.16667E-01	480277.2	3739102.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	LOCATION OF AREA Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
PAREA1	0	0.16744E-03	480490.6	3739435.0	432.0	1.93	18	4.15	YES	HRDOW	NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs							
PAREA1	PAREA1 ,							
SLINE1	L0000001	, L0000002	, L0000003	, L0000004	, L0000005	, L0000006	, L0000007	, L0000008 ,
	L0000009	, L0000010	, L0000011	, L0000012	, L0000013	, L0000014	, L0000015	, L0000016 ,
	L0000017	, L0000018	, L0000019	, L0000020	, L0000021	, L0000022	, L0000023	, L0000024 ,
	L0000025	, L0000026	, L0000027	, L0000028	, L0000029	, L0000030	, L0000031	, L0000032 ,
	L0000033	, L0000034	, L0000035	, L0000036	, L0000037	, L0000038	, L0000039	, L0000040 ,
	L0000041	, L0000042	, L0000043	, L0000044	, L0000045	, L0000046	, L0000047	, L0000048 ,
	L0000049	, L0000050	, L0000051	, L0000052	, L0000053	, L0000054	, L0000055	, L0000056 ,
	L0000057	, L0000058	, L0000059	, L0000060 ,				
ALL	PAREA1	, L0000001	, L0000002	, L0000003	, L0000004	, L0000005	, L0000006	, L0000007 ,
	L0000008	, L0000009	, L0000010	, L0000011	, L0000012	, L0000013	, L0000014	, L0000015 ,
	L0000016	, L0000017	, L0000018	, L0000019	, L0000020	, L0000021	, L0000022	, L0000023 ,
	L0000024	, L0000025	, L0000026	, L0000027	, L0000028	, L0000029	, L0000030	, L0000031 ,
	L0000032	, L0000033	, L0000034	, L0000035	, L0000036	, L0000037	, L0000038	, L0000039 ,
	L0000040	, L0000041	, L0000042	, L0000043	, L0000044	, L0000045	, L0000046	, L0000047 ,
	L0000048	, L0000049	, L0000050	, L0000051	, L0000052	, L0000053	, L0000054	, L0000055 ,
	L0000056	, L0000057	, L0000058	, L0000059	, L0000060 ,			

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

```
 URBAN ID   URBAN POP                                   SOURCE IDs
 --------   ---------                                   ----------

             2492442.   PAREA1     , L0000001    , L0000002    , L0000003    , L0000004    , L0000005    , L0000006    ,
L0000007    ,
            L0000008    , L0000009    , L0000010    , L0000011    , L0000012    , L0000013    , L0000014    , L0000015    ,
            L0000016    , L0000017    , L0000018    , L0000019    , L0000020    , L0000021    , L0000022    , L0000023    ,
            L0000024    , L0000025    , L0000026    , L0000027    , L0000028    , L0000029    , L0000030    , L0000031    ,
            L0000032    , L0000033    , L0000034    , L0000035    , L0000036    , L0000037    , L0000038    , L0000039    ,
            L0000040    , L0000041    , L0000042    , L0000043    , L0000044    , L0000045    , L0000046    , L0000047    ,
            L0000048    , L0000049    , L0000050    , L0000051    , L0000052    , L0000053    , L0000054    , L0000055    ,
            L0000056    , L0000057    , L0000058    , L0000059    , L0000060    ,
```

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = PAREA1 ; SOURCE TYPE = AREAPOLY :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.0000E+00	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000001   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.0000E+00	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

```
                                        *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                           (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                              *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                        (METERS/SEC)

                                             1.54,   3.09,   5.14,   8.23,  10.80,
```

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: Met Data\PERI_V11_trimmed.sfc Met Version: 22112
Profile file: Met Data\PERI_V11_trimmed.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2016 Year: 2016

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
16	01	01	1	01	-21.3	0.220	-9.000	-9.000	-999.	248.	53.3	0.06	0.53	1.00	3.11	342.	11.6	279.8	5.4
16	01	01	1	02	-23.0	0.238	-9.000	-9.000	-999.	278.	62.2	0.06	0.53	1.00	3.35	343.	11.6	279.6	5.4
16	01	01	1	03	-19.6	0.202	-9.000	-9.000	-999.	218.	44.9	0.06	0.53	1.00	2.87	342.	11.6	279.1	5.4
16	01	01	1	04	-15.2	0.175	-9.000	-9.000	-999.	176.	33.8	0.06	0.53	1.00	2.51	340.	11.6	278.7	5.4
16	01	01	1	05	-4.4	0.093	-9.000	-9.000	-999.	70.	15.7	0.06	0.53	1.00	1.36	335.	11.6	277.5	5.4
16	01	01	1	06	-13.9	0.167	-9.000	-9.000	-999.	164.	30.7	0.06	0.53	1.00	2.41	337.	11.6	278.0	5.4
16	01	01	1	07	-7.6	0.122	-9.000	-9.000	-999.	102.	20.5	0.06	0.53	1.00	1.80	356.	11.6	277.3	5.4
16	01	01	1	08	-25.5	0.388	-9.000	-9.000	-999.	579.	197.5	0.09	0.53	0.53	4.73	74.	10.1	274.3	5.4
16	01	01	1	09	22.4	0.406	0.330	0.005	55.	621.	-258.7	0.09	0.53	0.32	4.70	79.	10.1	277.2	5.4
16	01	01	1	10	55.5	0.399	0.599	0.005	134.	605.	-99.0	0.09	0.53	0.25	4.46	85.	10.1	283.0	5.4
16	01	01	1	11	78.4	0.108	0.975	0.005	409.	229.	-1.4	0.06	0.53	0.22	0.82	331.	11.6	286.7	5.4
16	01	01	1	12	85.7	0.137	1.097	0.005	532.	123.	-2.6	0.04	0.53	0.21	1.30	34.	11.6	288.6	5.4
16	01	01	1	13	85.3	0.107	1.147	0.005	611.	84.	-1.2	0.04	0.53	0.21	0.89	48.	11.6	290.2	5.4
16	01	01	1	14	61.6	0.118	1.057	0.005	662.	97.	-2.3	0.06	0.53	0.22	0.96	9.	11.6	290.5	5.4
16	01	01	1	15	45.7	0.115	1.038	0.005	844.	93.	-2.9	0.06	0.53	0.26	0.99	352.	11.6	290.7	5.4
16	01	01	1	16	14.9	0.098	0.732	0.005	908.	73.	-5.4	0.04	0.53	0.35	1.03	41.	11.6	289.9	5.4
16	01	01	1	17	-13.7	0.171	-9.000	-9.000	-999.	169.	32.1	0.04	0.53	0.63	2.63	59.	11.6	287.2	5.4
16	01	01	1	18	-17.5	0.186	-9.000	-9.000	-999.	193.	38.2	0.04	0.53	1.00	2.86	43.	11.6	284.7	5.4
16	01	01	1	19	-18.1	0.193	-9.000	-9.000	-999.	204.	41.1	0.06	0.53	1.00	2.70	15.	11.6	283.9	5.4
16	01	01	1	20	-11.3	0.151	-9.000	-9.000	-999.	141.	26.4	0.06	0.53	1.00	2.15	10.	11.6	283.3	5.4
16	01	01	1	21	-4.4	0.094	-9.000	-9.000	-999.	69.	16.1	0.06	0.53	1.00	1.35	17.	11.6	283.0	5.4
16	01	01	1	22	-3.0	0.077	-9.000	-9.000	-999.	52.	13.5	0.04	0.53	1.00	1.16	36.	11.6	282.6	5.4
16	01	01	1	23	-2.4	0.074	-9.000	-9.000	-999.	48.	14.3	0.06	0.53	1.00	0.95	360.	11.6	281.7	5.4
16	01	01	1	24	-1.7	0.068	-9.000	-9.000	-999.	43.	15.7	0.06	0.53	1.00	0.74	334.	11.6	280.6	5.4

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
16	01	01	01	5.4	0	-999.	-99.00	279.8	99.0	-99.00	-99.00
16	01	01	01	11.6	1	342.	3.11	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PAREA1 ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480304.23	3739539.12	0.81590	480314.23	3739539.12	0.89753
480324.23	3739539.12	0.99119	480334.23	3739539.12	1.09902
480344.23	3739539.12	1.22351	480374.23	3739539.12	1.72767
480384.23	3739539.12	1.95087	480394.23	3739539.12	2.20762
480404.23	3739539.12	2.50624	480414.23	3739539.12	2.85279
480424.23	3739539.12	3.22385	480464.23	3739539.12	4.90028
480474.23	3739539.12	5.27135 MEIR	480304.23	3739549.12	0.80200
480314.23	3739549.12	0.88098	480324.23	3739549.12	0.97121
480334.23	3739549.12	1.07458	480344.23	3739549.12	1.19322
480374.23	3739549.12	1.66554	480384.23	3739549.12	1.87054
480394.23	3739549.12	2.10336	480404.23	3739549.12	2.36995
480414.23	3739549.12	2.67315	480424.23	3739549.12	2.99559
480464.23	3739549.12	4.37571	480474.23	3739549.12	4.66750
480304.23	3739559.12	0.78791	480314.23	3739559.12	0.86416
480324.23	3739559.12	0.95091	480334.23	3739559.12	1.04975
480344.23	3739559.12	1.16249	480374.23	3739559.12	1.60359
480384.23	3739559.12	1.79132	480394.23	3739559.12	2.00190
480404.23	3739559.12	2.23821	480414.23	3739559.12	2.50086
480424.23	3739559.12	2.78351	480464.23	3739559.12	3.92873
480474.23	3739559.12	4.16091	480304.23	3739569.12	0.77364
480314.23	3739569.12	0.84713	480324.23	3739569.12	0.93035
480334.23	3739569.12	1.02462	480344.23	3739569.12	1.13145
480374.23	3739569.12	1.54229	480384.23	3739569.12	1.71376
480394.23	3739569.12	1.90383	480404.23	3739569.12	2.11301
480414.23	3739569.12	2.34053	480424.23	3739569.12	2.58188
480464.23	3739569.12	3.54484	480474.23	3739569.12	3.73141
480304.23	3739579.12	0.75927	480314.23	3739579.12	0.82994
480324.23	3739579.12	0.90957	480334.23	3739579.12	0.99928
480344.23	3739579.12	1.10027	480374.23	3739579.12	1.48195
480384.23	3739579.12	1.63826	480394.23	3739579.12	1.80955
480404.23	3739579.12	1.99507	480414.23	3739579.12	2.19301
480424.23	3739579.12	2.40013	480464.23	3739579.12	3.21285
480474.23	3739579.12	3.36404	480304.23	3739589.12	0.74479
480314.23	3739589.12	0.81263	480324.23	3739589.12	0.88867
480334.23	3739589.12	0.97384	480344.23	3739589.12	1.06905
480374.23	3739589.12	1.42289	480384.23	3739589.12	1.56514
480394.23	3739589.12	1.71935	480404.23	3739589.12	1.88448

480414.23	3739589.12	2.05856	480424.23	3739589.12	2.23848
480464.23	3739589.12	2.92390	480474.23	3739589.12	3.04736
480304.23	3739599.12	0.73028	480314.23	3739599.12	0.79526

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480304.23	3739539.12	16.07840	480314.23	3739539.12	16.11257
480324.23	3739539.12	16.06872	480334.23	3739539.12	16.01333
480344.23	3739539.12	15.96619	480374.23	3739539.12	15.88835
480384.23	3739539.12	15.87614	480394.23	3739539.12	15.86662
480404.23	3739539.12	15.82267	480414.23	3739539.12	15.84856
480424.23	3739539.12	15.89297	480464.23	3739539.12	16.29480
480474.23	3739539.12	15.91093 MEIR	480304.23	3739549.12	10.69016
480314.23	3739549.12	10.81644	480324.23	3739549.12	10.84569
480334.23	3739549.12	10.83690	480344.23	3739549.12	10.81551
480374.23	3739549.12	10.75041	480384.23	3739549.12	10.73366
480394.23	3739549.12	10.71885	480404.23	3739549.12	10.70401
480414.23	3739549.12	10.72295	480424.23	3739549.12	10.73967
480464.23	3739549.12	10.65257	480474.23	3739549.12	10.21606
480304.23	3739559.12	7.63395	480314.23	3739559.12	7.77868
480324.23	3739559.12	7.84027	480334.23	3739559.12	7.85927
480344.23	3739559.12	7.85760	480374.23	3739559.12	7.81518
480384.23	3739559.12	7.79896	480394.23	3739559.12	7.78351
480404.23	3739559.12	7.77192	480414.23	3739559.12	7.77307
480424.23	3739559.12	7.78007	480464.23	3739559.12	7.49733
480474.23	3739559.12	7.13557	480304.23	3739569.12	5.77596
480314.23	3739569.12	5.91105	480324.23	3739569.12	5.98274
480334.23	3739569.12	6.01614	480344.23	3739569.12	6.02737
480374.23	3739569.12	6.00591	480384.23	3739569.12	5.99200
480394.23	3739569.12	5.97728	480404.23	3739569.12	5.96318
480414.23	3739569.12	5.95070	480424.23	3739569.12	5.93543
480464.23	3739569.12	5.60816	480474.23	3739569.12	5.32493
480304.23	3739579.12	4.56726	480314.23	3739579.12	4.68459
480324.23	3739579.12	4.75547	480334.23	3739579.12	4.79476
480344.23	3739579.12	4.81346	480374.23	3739579.12	4.80824
480384.23	3739579.12	4.79685	480394.23	3739579.12	4.78311
480404.23	3739579.12	4.76715	480414.23	3739579.12	4.74782
480424.23	3739579.12	4.72189	480464.23	3739579.12	4.39573
480474.23	3739579.12	4.17381	480304.23	3739589.12	3.73367
480314.23	3739589.12	3.83286	480324.23	3739589.12	3.89820

480334.23	3739589.12	3.93843	480344.23	3739589.12	3.96076
480374.23	3739589.12	3.96698	480384.23	3739589.12	3.95778
480394.23	3739589.12	3.94506	480404.23	3739589.12	3.92875
480414.23	3739589.12	3.90760	480424.23	3739589.12	3.87877
480464.23	3739589.12	3.56841	480474.23	3739589.12	3.39224
480304.23	3739599.12	3.13031	480314.23	3739599.12	3.21346

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                                         *** THE SUMMARY OF MAXIMUM PERIOD ( 43848 HRS) RESULTS ***

                                     ** CONC OF OTHER    IN MICROGRAMS/M**3                          **

                                                                                                              NETWORK
GROUP ID                        AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    MEIR Location
PAREA1    1ST HIGHEST VALUE IS       5.27135 AT (  480474.23,  3739539.12,   432.00,   432.00,    0.00)  DC
          2ND HIGHEST VALUE IS       4.93915 AT (  480474.23,  3739539.12,   432.00,   432.00,    6.10)  DC
          3RD HIGHEST VALUE IS       4.90028 AT (  480464.23,  3739539.12,   432.00,   432.00,    0.00)  DC
          4TH HIGHEST VALUE IS       4.66750 AT (  480474.23,  3739549.12,   432.00,   432.00,    0.00)  DC
          5TH HIGHEST VALUE IS       4.58128 AT (  480464.23,  3739539.12,   432.00,   432.00,    6.10)  DC
          6TH HIGHEST VALUE IS       4.39156 AT (  480474.23,  3739549.12,   432.00,   432.00,    6.10)  DC
          7TH HIGHEST VALUE IS       4.37571 AT (  480464.23,  3739549.12,   432.00,   432.00,    0.00)  DC
          8TH HIGHEST VALUE IS       4.16091 AT (  480474.23,  3739559.12,   432.00,   432.00,    0.00)  DC
          9TH HIGHEST VALUE IS       4.10866 AT (  480464.23,  3739549.12,   432.00,   432.00,    6.10)  DC
         10TH HIGHEST VALUE IS       3.92873 AT (  480464.23,  3739559.12,   432.00,   432.00,    0.00)  DC

SLINE1    1ST HIGHEST VALUE IS      21.37444 AT (  480265.82,  3739470.89,   433.00,   433.00,    0.00)  DC
          2ND HIGHEST VALUE IS      21.30258 AT (  480265.82,  3739480.89,   433.00,   433.00,    0.00)  DC
          3RD HIGHEST VALUE IS      21.13668 AT (  480265.82,  3739490.89,   433.00,   433.00,    0.00)  DC
          4TH HIGHEST VALUE IS      16.67379 AT (  480265.82,  3739520.89,   433.00,   433.00,    0.00)  DC
          5TH HIGHEST VALUE IS      16.29480 AT (  480464.23,  3739539.12,   432.00,   432.00,    0.00)  DC
          6TH HIGHEST VALUE IS      16.21015 AT (  480265.82,  3739500.89,   433.00,   433.00,    0.00)  DC
          7TH HIGHEST VALUE IS      16.11257 AT (  480314.23,  3739539.12,   433.00,   433.00,    0.00)  DC
          8TH HIGHEST VALUE IS      16.07840 AT (  480304.23,  3739539.12,   433.00,   433.00,    0.00)  DC
          9TH HIGHEST VALUE IS      16.06872 AT (  480324.23,  3739539.12,   433.00,   433.00,    0.00)  DC
         10TH HIGHEST VALUE IS      16.01333 AT (  480334.23,  3739539.12,   433.00,   433.00,    0.00)  DC

ALL       1ST HIGHEST VALUE IS      22.01077 AT (  480265.82,  3739470.89,   433.00,   433.00,    0.00)  DC
          2ND HIGHEST VALUE IS      21.93132 AT (  480265.82,  3739480.89,   433.00,   433.00,    0.00)  DC
          3RD HIGHEST VALUE IS      21.75807 AT (  480265.82,  3739490.89,   433.00,   433.00,    0.00)  DC
          4TH HIGHEST VALUE IS      21.19507 AT (  480464.23,  3739539.12,   432.00,   432.00,    0.00)  DC
          5TH HIGHEST VALUE IS      21.18228 AT (  480474.23,  3739539.12,   432.00,   432.00,    0.00)  DC
          6TH HIGHEST VALUE IS      19.11683 AT (  480424.23,  3739539.12,   432.19,   432.19,    0.00)  DC
          7TH HIGHEST VALUE IS      18.70135 AT (  480414.23,  3739539.12,   432.52,   432.52,    0.00)  DC
          8TH HIGHEST VALUE IS      18.32891 AT (  480404.23,  3739539.12,   432.86,   432.86,    0.00)  DC
          9TH HIGHEST VALUE IS      18.07424 AT (  480394.23,  3739539.12,   433.00,   433.00,    0.00)  DC
         10TH HIGHEST VALUE IS      17.82701 AT (  480384.23,  3739539.12,   433.00,   433.00,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
```

```
DP = DISCPOLR
```

```
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  URBAN  ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of           0 Fatal Error Message(s)
A Total of           2 Warning Message(s)
A Total of         598 Informational Message(s)

A Total of       43848 Hours Were Processed

A Total of         227 Calm Hours Identified

A Total of         371 Missing Hours Identified (  0.85 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
ME W186     967       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used           0.50
ME W187     967       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

```
*** AERMOD - VERSION 23132  ***   *** Construction HRA - Students                                           ***        11/24/24
*** AERMET - VERSION  22112 ***   *** Sky View Elementary School Expansion Project                          ***        19:18:32
                                                                                                                       PAGE   1
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  URBAN  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

** Model Options Selected:
     * Model Allows User-Specified Options
     * Model Is Setup For Calculation of Average CONCentration Values.
     * NO GAS DEPOSITION Data Provided.
     * NO PARTICLE DEPOSITION Data Provided.
     * Model Uses NO DRY DEPLETION. DDPLETE  =  F
     * Model Uses NO WET DEPLETION. WETDPLT  =  F
     * Stack-tip Downwash.
     * Allow FLAT/ELEV Terrain Option by Source,
       with      0 FLAT and     61 ELEV Source(s).
     * Use Calms Processing Routine.
     * Use Missing Data Processing Routine.
     * No Exponential Decay.
     * Model Uses URBAN Dispersion Algorithm for the SBL for    61 Source(s),
       for Total of    1 Urban Area(s):
  Urban Population =   2492442.0 ;  Urban Roughness Length =  1.000 m
     * Urban Roughness Length of 1.0 Meter Used.
     * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
     * CCVR_Sub - Meteorological data includes CCVR substitutions
     * TEMP_Sub - Meteorological data includes TEMP substitutions
     * Model Accepts FLAGPOLE Receptor . Heights.
     * The User Specified a Pollutant Type of: OTHER

**Model Calculates PERIOD Averages Only

**This Run Includes:     61 Source(s);       3 Source Group(s); and      78 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:     60 VOLUME source(s)
                and:      1 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 RLINE/RLINEXT source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                and:      0 SWPOINT source(s)


**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date:  22112

**Output Options Selected:
```

```
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   442.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      3.6 MB of RAM.

**Input Runstream File:          aermod.inp
**Output Print File:             aermod.out

**Detailed Error/Message File:   PESD-02 Students.err
**File for Summary of Results:   PESD-02 Students.sum
```

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
L0000001	0	0.16667E-01	480487.7	3739443.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000002	0	0.16667E-01	480487.7	3739455.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000003	0	0.16667E-01	480487.7	3739467.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000004	0	0.16667E-01	480487.7	3739479.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000005	0	0.16667E-01	480487.7	3739491.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000006	0	0.16667E-01	480487.7	3739503.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000007	0	0.16667E-01	480487.7	3739515.3	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000008	0	0.16667E-01	480483.4	3739522.9	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000009	0	0.16667E-01	480471.4	3739522.9	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000010	0	0.16667E-01	480459.4	3739522.8	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000011	0	0.16667E-01	480447.4	3739522.7	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000012	0	0.16667E-01	480435.4	3739522.7	432.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000013	0	0.16667E-01	480423.4	3739522.6	432.2	4.15	5.58	1.93	YES	HRDOW	NO
L0000014	0	0.16667E-01	480411.4	3739522.5	432.6	4.15	5.58	1.93	YES	HRDOW	NO
L0000015	0	0.16667E-01	480399.4	3739522.5	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000016	0	0.16667E-01	480387.4	3739522.4	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000017	0	0.16667E-01	480375.4	3739522.4	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000018	0	0.16667E-01	480363.4	3739522.3	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000019	0	0.16667E-01	480351.4	3739522.2	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000020	0	0.16667E-01	480339.4	3739522.2	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000021	0	0.16667E-01	480327.4	3739522.1	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000022	0	0.16667E-01	480315.4	3739522.1	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000023	0	0.16667E-01	480303.4	3739522.0	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000024	0	0.16667E-01	480291.4	3739521.9	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000025	0	0.16667E-01	480279.4	3739521.9	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000026	0	0.16667E-01	480278.5	3739510.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000027	0	0.16667E-01	480278.4	3739498.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000028	0	0.16667E-01	480278.4	3739486.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000029	0	0.16667E-01	480278.4	3739474.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000030	0	0.16667E-01	480278.3	3739462.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000031	0	0.16667E-01	480278.3	3739450.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000032	0	0.16667E-01	480278.2	3739438.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000033	0	0.16667E-01	480278.2	3739426.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000034	0	0.16667E-01	480278.2	3739414.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000035	0	0.16667E-01	480278.1	3739402.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000036	0	0.16667E-01	480278.1	3739390.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000037	0	0.16667E-01	480278.1	3739378.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000038	0	0.16667E-01	480278.0	3739366.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO

L0000039	0	0.16667E-01	480278.0	3739354.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000040	0	0.16667E-01	480277.9	3739342.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
L0000041	0	0.16667E-01	480277.9	3739330.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000042	0	0.16667E-01	480277.9	3739318.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000043	0	0.16667E-01	480277.8	3739306.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000044	0	0.16667E-01	480277.8	3739294.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000045	0	0.16667E-01	480277.8	3739282.7	433.0	4.15	5.58	1.93	YES	HRDOW	NO
L0000046	0	0.16667E-01	480277.7	3739270.7	432.8	4.15	5.58	1.93	YES	HRDOW	NO
L0000047	0	0.16667E-01	480277.7	3739258.7	432.5	4.15	5.58	1.93	YES	HRDOW	NO
L0000048	0	0.16667E-01	480277.6	3739246.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000049	0	0.16667E-01	480277.6	3739234.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000050	0	0.16667E-01	480277.6	3739222.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000051	0	0.16667E-01	480277.5	3739210.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000052	0	0.16667E-01	480277.5	3739198.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000053	0	0.16667E-01	480277.5	3739186.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000054	0	0.16667E-01	480277.4	3739174.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000055	0	0.16667E-01	480277.4	3739162.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000056	0	0.16667E-01	480277.4	3739150.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000057	0	0.16667E-01	480277.3	3739138.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000058	0	0.16667E-01	480277.3	3739126.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000059	0	0.16667E-01	480277.2	3739114.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO
L0000060	0	0.16667E-01	480277.2	3739102.7	432.1	4.15	5.58	1.93	YES	HRDOW	NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	LOCATION OF AREA Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
PAREA1	0	0.16744E-03	480490.6	3739435.0	432.0	1.93	18	4.15	YES	HRDOW	NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs							
PAREA1	PAREA1 ,							
SLINE1	L0000001 ,	L0000002 ,	L0000003 ,	L0000004 ,	L0000005 ,	L0000006 ,	L0000007 ,	L0000008 ,
	L0000009 ,	L0000010 ,	L0000011 ,	L0000012 ,	L0000013 ,	L0000014 ,	L0000015 ,	L0000016 ,
	L0000017 ,	L0000018 ,	L0000019 ,	L0000020 ,	L0000021 ,	L0000022 ,	L0000023 ,	L0000024 ,
	L0000025 ,	L0000026 ,	L0000027 ,	L0000028 ,	L0000029 ,	L0000030 ,	L0000031 ,	L0000032 ,
	L0000033 ,	L0000034 ,	L0000035 ,	L0000036 ,	L0000037 ,	L0000038 ,	L0000039 ,	L0000040 ,
	L0000041 ,	L0000042 ,	L0000043 ,	L0000044 ,	L0000045 ,	L0000046 ,	L0000047 ,	L0000048 ,
	L0000049 ,	L0000050 ,	L0000051 ,	L0000052 ,	L0000053 ,	L0000054 ,	L0000055 ,	L0000056 ,
	L0000057 ,	L0000058 ,	L0000059 ,	L0000060 ,				
ALL	PAREA1 ,	L0000001 ,	L0000002 ,	L0000003 ,	L0000004 ,	L0000005 ,	L0000006 ,	L0000007 ,
	L0000008 ,	L0000009 ,	L0000010 ,	L0000011 ,	L0000012 ,	L0000013 ,	L0000014 ,	L0000015 ,
	L0000016 ,	L0000017 ,	L0000018 ,	L0000019 ,	L0000020 ,	L0000021 ,	L0000022 ,	L0000023 ,
	L0000024 ,	L0000025 ,	L0000026 ,	L0000027 ,	L0000028 ,	L0000029 ,	L0000030 ,	L0000031 ,
	L0000032 ,	L0000033 ,	L0000034 ,	L0000035 ,	L0000036 ,	L0000037 ,	L0000038 ,	L0000039 ,
	L0000040 ,	L0000041 ,	L0000042 ,	L0000043 ,	L0000044 ,	L0000045 ,	L0000046 ,	L0000047 ,
	L0000048 ,	L0000049 ,	L0000050 ,	L0000051 ,	L0000052 ,	L0000053 ,	L0000054 ,	L0000055 ,
	L0000056 ,	L0000057 ,	L0000058 ,	L0000059 ,	L0000060 ,			

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

```
 URBAN ID   URBAN POP                                    SOURCE IDs
 --------   ---------                                    ----------

             2492442.   PAREA1     , L0000001   , L0000002   , L0000003   , L0000004   , L0000005   , L0000006   ,
L0000007   ,
            L0000008   , L0000009   , L0000010   , L0000011   , L0000012   , L0000013   , L0000014   , L0000015   ,
            L0000016   , L0000017   , L0000018   , L0000019   , L0000020   , L0000021   , L0000022   , L0000023   ,
            L0000024   , L0000025   , L0000026   , L0000027   , L0000028   , L0000029   , L0000030   , L0000031   ,
            L0000032   , L0000033   , L0000034   , L0000035   , L0000036   , L0000037   , L0000038   , L0000039   ,
            L0000040   , L0000041   , L0000042   , L0000043   , L0000044   , L0000045   , L0000046   , L0000047   ,
            L0000048   , L0000049   , L0000050   , L0000051   , L0000052   , L0000053   , L0000054   , L0000055   ,
            L0000056   , L0000057   , L0000058   , L0000059   , L0000060   ,
```

```
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = PAREA1       ; SOURCE TYPE = AREAPOLY :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                             DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .1000E+01
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .0000E+00   13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000001 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.0000E+00	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: Met Data\PERI_V11_trimmed.sfc   Met Version: 22112
Profile file: Met Data\PERI_V11_trimmed.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171   Upper air station no.: 3190
Name: UNKNOWN   Name: UNKNOWN
Year: 2016   Year: 2016

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
16	01	01	1	01	-21.3	0.220	-9.000	-9.000	-999.	248.	53.3	0.06	0.53	1.00	3.11	342.	11.6	279.8	5.4
16	01	01	1	02	-23.0	0.238	-9.000	-9.000	-999.	278.	62.2	0.06	0.53	1.00	3.35	343.	11.6	279.6	5.4
16	01	01	1	03	-19.6	0.202	-9.000	-9.000	-999.	218.	44.9	0.06	0.53	1.00	2.87	342.	11.6	279.1	5.4
16	01	01	1	04	-15.2	0.175	-9.000	-9.000	-999.	176.	33.8	0.06	0.53	1.00	2.51	340.	11.6	278.7	5.4
16	01	01	1	05	-4.4	0.093	-9.000	-9.000	-999.	70.	15.7	0.06	0.53	1.00	1.36	335.	11.6	277.5	5.4
16	01	01	1	06	-13.9	0.167	-9.000	-9.000	-999.	164.	30.7	0.06	0.53	1.00	2.41	337.	11.6	278.0	5.4
16	01	01	1	07	-7.6	0.122	-9.000	-9.000	-999.	102.	20.5	0.06	0.53	1.00	1.80	356.	11.6	277.3	5.4
16	01	01	1	08	-25.5	0.388	-9.000	-9.000	-999.	579.	197.5	0.09	0.53	0.53	4.73	74.	10.1	274.3	5.4
16	01	01	1	09	22.4	0.406	0.330	0.005	55.	621.	-258.7	0.09	0.53	0.32	4.70	79.	10.1	277.2	5.4
16	01	01	1	10	55.5	0.399	0.599	0.005	134.	605.	-99.0	0.09	0.53	0.25	4.46	85.	10.1	283.0	5.4
16	01	01	1	11	78.4	0.108	0.975	0.005	409.	229.	-1.4	0.06	0.53	0.22	0.82	331.	11.6	286.7	5.4
16	01	01	1	12	85.7	0.137	1.097	0.005	532.	123.	-2.6	0.04	0.53	0.21	1.30	34.	11.6	288.6	5.4
16	01	01	1	13	85.3	0.107	1.147	0.005	611.	84.	-1.2	0.04	0.53	0.21	0.89	48.	11.6	290.2	5.4
16	01	01	1	14	61.6	0.118	1.057	0.005	662.	97.	-2.3	0.06	0.53	0.22	0.96	9.	11.6	290.5	5.4
16	01	01	1	15	45.7	0.115	1.038	0.005	844.	93.	-2.9	0.06	0.53	0.26	0.99	352.	11.6	290.7	5.4
16	01	01	1	16	14.9	0.098	0.732	0.005	908.	73.	-5.4	0.04	0.53	0.35	1.03	41.	11.6	289.9	5.4
16	01	01	1	17	-13.7	0.171	-9.000	-9.000	-999.	169.	32.1	0.04	0.53	0.63	2.63	59.	11.6	287.2	5.4
16	01	01	1	18	-17.5	0.186	-9.000	-9.000	-999.	193.	38.2	0.04	0.53	1.00	2.86	43.	11.6	284.7	5.4
16	01	01	1	19	-18.1	0.193	-9.000	-9.000	-999.	204.	41.1	0.06	0.53	1.00	2.70	15.	11.6	283.9	5.4
16	01	01	1	20	-11.3	0.151	-9.000	-9.000	-999.	141.	26.4	0.06	0.53	1.00	2.15	10.	11.6	283.3	5.4
16	01	01	1	21	-4.4	0.094	-9.000	-9.000	-999.	69.	16.1	0.06	0.53	1.00	1.35	17.	11.6	283.0	5.4
16	01	01	1	22	-3.0	0.077	-9.000	-9.000	-999.	52.	13.5	0.04	0.53	1.00	1.16	36.	11.6	282.6	5.4
16	01	01	1	23	-2.4	0.074	-9.000	-9.000	-999.	48.	14.3	0.06	0.53	1.00	0.95	360.	11.6	281.7	5.4
16	01	01	1	24	-1.7	0.068	-9.000	-9.000	-999.	43.	15.7	0.06	0.53	1.00	0.74	334.	11.6	280.6	5.4

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
16	01	01	01	5.4	0	-999.	-99.00	279.8	99.0	-99.00	-99.00
16	01	01	01	11.6	1	342.	3.11	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PAREA1 ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC		X-COORD (M)	Y-COORD (M)	CONC	
480510.12	3739466.24	25.46562		480509.30	3739455.56	35.88899	
480510.12	3739444.88	53.11888	Indoor MEIS	480534.36	3739465.42	21.37965	
480549.15	3739465.42	18.03305		480563.11	3739464.19	14.83835	
480562.29	3739444.88	27.73565		480548.74	3739444.88	34.65892	
480533.95	3739445.70	39.64232		480590.23	3739467.88	6.92631	
480591.05	3739442.00	9.34522		480614.46	3739446.11	3.59050	
480615.70	3739433.79	3.51527		480626.38	3739432.97	2.56957	
480599.68	3739415.71	7.53563		480607.48	3739416.95	5.27568	
480617.75	3739414.89	3.77976		480627.20	3739414.89	2.85394	
480635.00	3739414.89	2.32968		480621.45	3739389.01	5.44185	
480610.77	3739389.01	8.25454		480605.02	3739388.60	10.65106	
480598.85	3739389.83	13.87472		480586.53	3739420.64	14.77854	
480587.35	3739408.32	18.47584		480570.92	3739391.48	55.20063	
480524.44	3739348.14	61.37893		480534.44	3739348.14	44.20441	
480544.44	3739348.14	35.55074		480554.44	3739348.14	29.77455	
480564.44	3739348.14	25.25485		480574.44	3739348.14	21.46290	
480584.44	3739348.14	18.10522		480594.44	3739348.14	15.00420	
480604.44	3739348.14	12.14971		480614.44	3739348.14	9.63185	
480624.44	3739348.14	7.52542		480634.44	3739348.14	5.84125	
480644.44	3739348.14	4.53711		480524.44	3739358.14	71.38129	
480534.44	3739358.14	50.72264		480544.44	3739358.14	41.39354	
480554.44	3739358.14	34.61822		480564.44	3739358.14	29.06821	
480574.44	3739358.14	24.43281		480584.44	3739358.14	20.24226	
480594.44	3739358.14	16.26444		480604.44	3739358.14	12.64574	
480614.44	3739358.14	9.60822		480624.44	3739358.14	7.22743	
480634.44	3739358.14	5.44288		480644.44	3739358.14	4.13660	
480524.44	3739368.14	82.65254		480534.44	3739368.14	61.74792	
480544.44	3739368.14	50.69717		480554.44	3739368.14	41.30015	
480564.44	3739368.14	34.23379		480574.44	3739368.14	28.49309	
480584.44	3739368.14	22.95137		480594.44	3739368.14	17.51661	
480604.44	3739368.14	12.83269		480614.44	3739368.14	9.24831	
480624.44	3739368.14	6.68223		480634.44	3739368.14	4.89745	
480644.44	3739368.14	3.66360		480524.44	3739378.14	101.86371	Outdoor MEIS
480534.44	3739378.14	83.54036		480544.44	3739378.14	63.54000	
480554.44	3739378.14	50.07909		480564.44	3739378.14	41.99352	
480574.44	3739378.14	34.54027		480584.44	3739378.14	26.23616	
480594.44	3739378.14	18.28930		480604.44	3739378.14	12.37799	

480614.44	3739378.14	8.44091	480624.44	3739378.14	5.89685
480634.44	3739378.14	4.24937	480644.44	3739378.14	3.16289

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC		X-COORD (M)	Y-COORD (M)	CONC	
480510.12	3739466.24	15.15459		480509.30	3739455.56	14.79445	
480510.12	3739444.88	12.95549	Indoor MEIS	480534.36	3739465.42	6.29235	
480549.15	3739465.42	4.05073		480563.11	3739464.19	2.85003	
480562.29	3739444.88	3.07911		480548.74	3739444.88	4.22528	
480533.95	3739445.70	6.22039		480590.23	3739467.88	1.60986	
480591.05	3739442.00	1.75591		480614.46	3739446.11	1.18968	
480615.70	3739433.79	1.21807		480626.38	3739432.97	1.05287	
480599.68	3739415.71	1.62857		480607.48	3739416.95	1.44271	
480617.75	3739414.89	1.24996		480627.20	3739414.89	1.09907	
480635.00	3739414.89	0.99368		480621.45	3739389.01	1.24843	
480610.77	3739389.01	1.43285		480605.02	3739388.60	1.54570	
480598.85	3739389.83	1.67902		480586.53	3739420.64	1.99896	
480587.35	3739408.32	1.99095		480570.92	3739391.48	2.47018	
480524.44	3739348.14	2.39810		480534.44	3739348.14	2.34197	
480544.44	3739348.14	2.25984		480554.44	3739348.14	2.15334	
480564.44	3739348.14	2.02751		480574.44	3739348.14	1.88900	
480584.44	3739348.14	1.74448		480594.44	3739348.14	1.59975	
480604.44	3739348.14	1.45926		480614.44	3739348.14	1.32613	
480624.44	3739348.14	1.20230		480634.44	3739348.14	1.08877	
480644.44	3739348.14	0.98581		480524.44	3739358.14	2.67037	
480534.44	3739358.14	2.59581		480544.44	3739358.14	2.48436	
480554.44	3739358.14	2.34225		480564.44	3739358.14	2.17926	
480574.44	3739358.14	2.00565		480584.44	3739358.14	1.83026	
480594.44	3739358.14	1.65976		480604.44	3739358.14	1.49866	
480614.44	3739358.14	1.34964		480624.44	3739358.14	1.21397	
480634.44	3739358.14	1.09190		480644.44	3739358.14	0.98303	
480524.44	3739368.14	3.01228		480534.44	3739368.14	2.90342	
480544.44	3739368.14	2.74479		480554.44	3739368.14	2.55102	
480564.44	3739368.14	2.33855		480574.44	3739368.14	2.12156	
480584.44	3739368.14	1.91042		480594.44	3739368.14	1.71183	
480604.44	3739368.14	1.52949		480614.44	3739368.14	1.36494	
480624.44	3739368.14	1.21831		480634.44	3739368.14	1.08882	
480644.44	3739368.14	0.97519		480524.44	3739378.14	3.44497	Outdoor MEIS
480534.44	3739378.14	3.27361		480544.44	3739378.14	3.04082	

480554.44	3739378.14	2.77452	480564.44	3739378.14	2.49885
480574.44	3739378.14	2.23071	480584.44	3739378.14	1.98028
480594.44	3739378.14	1.75267	480604.44	3739378.14	1.54964
480614.44	3739378.14	1.37085	480624.44	3739378.14	1.21483
480634.44	3739378.14	1.07948	480644.44	3739378.14	0.96250

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , L0000001 , L0000002 , L0000003 , L0000004 ,
L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 ,
L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 ,
L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
480510.12	3739466.24	40.62021	480509.30	3739455.56	50.68344
480510.12	3739444.88	66.07437	480534.36	3739465.42	27.67200
480549.15	3739465.42	22.08378	480563.11	3739464.19	17.68839
480562.29	3739444.88	30.81476	480548.74	3739444.88	38.88420
480533.95	3739445.70	45.86271	480590.23	3739467.88	8.53616
480591.05	3739442.00	11.10114	480614.46	3739446.11	4.78018
480615.70	3739433.79	4.73334	480626.38	3739432.97	3.62243
480599.68	3739415.71	9.16420	480607.48	3739416.95	6.71839
480617.75	3739414.89	5.02973	480627.20	3739414.89	3.95301
480635.00	3739414.89	3.32337	480621.45	3739389.01	6.69028
480610.77	3739389.01	9.68739	480605.02	3739388.60	12.19676
480598.85	3739389.83	15.55375	480586.53	3739420.64	16.77750
480587.35	3739408.32	20.46679	480570.92	3739391.48	57.67081
480524.44	3739348.14	63.77702	480534.44	3739348.14	46.54638
480544.44	3739348.14	37.81058	480554.44	3739348.14	31.92789
480564.44	3739348.14	27.28235	480574.44	3739348.14	23.35190
480584.44	3739348.14	19.84970	480594.44	3739348.14	16.60395
480604.44	3739348.14	13.60897	480614.44	3739348.14	10.95798
480624.44	3739348.14	8.72772	480634.44	3739348.14	6.93002
480644.44	3739348.14	5.52292	480524.44	3739358.14	74.05165
480534.44	3739358.14	53.31846	480544.44	3739358.14	43.87790
480554.44	3739358.14	36.96047	480564.44	3739358.14	31.24747
480574.44	3739358.14	26.43846	480584.44	3739358.14	22.07251
480594.44	3739358.14	17.92420	480604.44	3739358.14	14.14441
480614.44	3739358.14	10.95787	480624.44	3739358.14	8.44140
480634.44	3739358.14	6.53478	480644.44	3739358.14	5.11962
480524.44	3739368.14	85.66482	480534.44	3739368.14	64.65135
480544.44	3739368.14	53.44196	480554.44	3739368.14	43.85117
480564.44	3739368.14	36.57235	480574.44	3739368.14	30.61465
480584.44	3739368.14	24.86179	480594.44	3739368.14	19.22845
480604.44	3739368.14	14.36218	480614.44	3739368.14	10.61325
480624.44	3739368.14	7.90054	480634.44	3739368.14	5.98628
480644.44	3739368.14	4.63879	480524.44	3739378.14	105.30869
480534.44	3739378.14	86.81397	480544.44	3739378.14	66.58082

480554.44	3739378.14	52.85361	480564.44	3739378.14	44.49237
480574.44	3739378.14	36.77098	480584.44	3739378.14	28.21644
480594.44	3739378.14	20.04197	480604.44	3739378.14	13.92763
480614.44	3739378.14	9.81176	480624.44	3739378.14	7.11168
480634.44	3739378.14	5.32885	480644.44	3739378.14	4.12538

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER   IN MICROGRAMS/M**3   **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
			Outdoor MEIS		
PAREA1	1ST HIGHEST VALUE IS	101.86371 AT (	480524.44, 3739378.14, 432.00, 432.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	83.54036 AT (	480534.44, 3739378.14, 432.00, 432.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	82.65254 AT (	480524.44, 3739368.14, 432.00, 432.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	71.38129 AT (	480524.44, 3739358.14, 432.00, 432.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	63.54000 AT (	480544.44, 3739378.14, 432.00, 432.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	61.74792 AT (	480534.44, 3739368.14, 432.00, 432.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	61.37893 AT (	480524.44, 3739348.14, 432.00, 432.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	55.20063 AT (	480570.92, 3739391.48, 432.00, 432.00, 0.00)	DC	
			Indoor MEIS		
	9TH HIGHEST VALUE IS	53.11888 AT (	480510.12, 3739444.88, 432.00, 432.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	50.72264 AT (	480534.44, 3739358.14, 432.00, 432.00, 0.00)	DC	
SLINE1	1ST HIGHEST VALUE IS	15.15459 AT (	480510.12, 3739466.24, 432.00, 432.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	14.79445 AT (	480509.30, 3739455.56, 432.00, 432.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	12.95549 AT (	480510.12, 3739444.88, 432.00, 432.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	6.29235 AT (	480534.36, 3739465.42, 432.00, 432.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	6.22039 AT (	480533.95, 3739445.70, 432.00, 432.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	4.22528 AT (	480548.74, 3739444.88, 432.00, 432.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	4.05073 AT (	480549.15, 3739465.42, 432.00, 432.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	3.44497 AT (	480524.44, 3739378.14, 432.00, 432.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	3.27361 AT (	480534.44, 3739378.14, 432.00, 432.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	3.07911 AT (	480562.29, 3739444.88, 432.00, 432.00, 0.00)	DC	
ALL	1ST HIGHEST VALUE IS	105.30869 AT (	480524.44, 3739378.14, 432.00, 432.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	86.81397 AT (	480534.44, 3739378.14, 432.00, 432.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	85.66482 AT (	480524.44, 3739368.14, 432.00, 432.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	74.05165 AT (	480524.44, 3739358.14, 432.00, 432.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	66.58082 AT (	480544.44, 3739378.14, 432.00, 432.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	66.07437 AT (	480510.12, 3739444.88, 432.00, 432.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	64.65135 AT (	480534.44, 3739368.14, 432.00, 432.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	63.77702 AT (	480524.44, 3739348.14, 432.00, 432.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	57.67081 AT (	480570.92, 3739391.48, 432.00, 432.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	53.44196 AT (	480544.44, 3739368.14, 432.00, 432.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR

DC = DISCCART
DP = DISCPOLR

```
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  URBAN  ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of           0 Fatal Error Message(s)
A Total of           2 Warning Message(s)
A Total of         598 Informational Message(s)

A Total of       43848 Hours Were Processed

A Total of         227 Calm Hours Identified

A Total of         371 Missing Hours Identified (  0.85 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
ME W186     967       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used           0.50
ME W187     967       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

Appendix C. Construction Risk Calculations

Table C1
Residential Concentrations for Construction Risk Calculations

Contaminant (a)	Source (b)		Model Output [1] ($\mu g/m^3$) (c)	Emission Rates [2] (g/s) (d)	MEIR Conc. ($\mu g/m^3$) (e)	Total MEIR Conc. Annual Average ($\mu g/m^3$) (f)
Residential Receptors						
DPM	2025	On-Site	5.27	6.87E-03	3.62E-02	3.62E-02
		Truck Route	15.91	1.24E-06	1.97E-05	
	2026	On-Site	2.68	5.01E-03	1.34E-02	1.34E-02
		Truck Route	15.91	4.38E-07	6.96E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						
Residential Receptors - Mitigated Run: Tier 4 Interim Engines for eq. > 50 HP (Demo, Site Prep, & Grading) - MM AQ-1						
DPM	2025	On-Site	5.27	5.29E-03	2.79E-02	2.79E-02
		Truck Route	15.91	1.19E-06	1.90E-05	
	2026	On-Site	2.68	5.01E-03	1.34E-02	1.34E-02
		Truck Route	15.91	4.38E-07	6.96E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 480474.23E, 3739539.12N

[1] Model Output (Appendix B) at the MEIR based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Appendix A - Construction Emissions).

Table C2
Quantification of Health Risks for Off-site Residents
Construction Emissions

Source	MEIR Conc. (µg/m^3)	Weight Fraction	Contaminant	URF (µg/m^3)$^{-1}$	CPF (mg/kg/day)$^{-1}$	Dose (by age bin) 3rd Trimester (mg/kg-day)	0 < 2 years (mg/kg-day)	2 < 9 years (mg/kg-day)	2<16 years (mg/kg-day)	16<30 years (mg/kg-day)	Carcinogenic Risks (by age bin) 3rd Trimester per million	0 < 2 years per million	2 < 9 years per million	2<16 years per million	16<30 years per million	Total Cancer Risk per million	Chronic Hazards [1] Chronic REL (µg/m^3)	RESP
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
Residential Receptors																		
2025	3.62E-02	1.00E+00	DPM	3.0E-04	1.1E+00	1.25E-05	3.79E-05				4.00E-01	1.98E+00				2.38E+00	5.0E+00	7.25E-03
2026	1.34E-02	1.00E+00					1.40E-05					9.26E-01				9.26E-01		2.69E-03
															Total	**3.3**		**0.010**
Residential Receptors - Mitigated Run: Tier 4 Interim Engines for eq. > 50 HP (Demo, Site Prep, & Grading) - MM AQ-1																		
2025	2.79E-02	1.00E+00	DPM	3.0E-04	1.1E+00	9.66E-06	2.92E-05				3.08E-01	1.52E+00				1.83	5.0E+00	5.58E-03
2026	1.34E-02	1.00E+00					1.40E-05					9.26E-01				0.93		2.69E-03
															Total	**2.8**		**0.008**

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 480474.23E, 3739539.12N

		3rd Trimester	0 < 2 years	2 < 9 years	2<16 years	16<30 years
	OEHHA age bin	3rd Trimester	0 < 2 years	2 < 9 years	2<16 years	16<30 years
	exposure year(s)	2025	2025-2026			
Dose Exposure Factors:	requency (days/year)	350	350	350	350	350
	inhalation rate (L/kg-day) [2]	361	1090	861	745	335
	inhalation absorption factor	1	1	1	1	1
	conversion factor (mg/µg; m^3/L)	1.0E-06	1.0E-06	1.0E-06	1.0E-06	1.0E-06
Risk Calculation Factors:	age sensitivity factor	10	10	3	3	1
	averaging time (years)	70	70	70	70	70
	per million	1.0E+06	1.0E+06	1.0E+06	1.0E+06	1.0E+06
	fraction of time at home	0.85	0.85	0.72	0.72	0.73

Construction Year		exposure durations (year) [3] 3rd Trimester	0 < 2 years	Total
2025		0.25	0.41	0.66
2026			0.52	0.52
				1.18

[1] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

[2] Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

[3] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

Table C3
Sky View ES Outdoor Student MER Concentrations for Construction Risk Calculations

Contaminant (a)	Source (b)		Model Output [1] (μg/m³) (c)	Emission Rates [2] (g/s) (d)	MER Conc. (μg/m³) (e)	Total MER Conc. Annual Average (μg/m³) (f)
Sky View Elementary School Student - Outdoors						
DPM	2025	On-Site	101.86	6.87E-03	7.00E-01	7.00E-01
		Truck Route	3.44	1.24E-06	4.27E-06	
	2026	On-Site	101.86	5.01E-03	5.10E-01	5.10E-01
		Truck Route	3.44	4.38E-07	1.51E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						
Sky View Elementary School Student - Outdoors - Mitigated Run: Tier 4 Interim Engines for eq. > 50 HP (Demo, Site Prep, &						
DPM	2026	Phase 1 On-Site	101.86	5.29E-03	5.39E-01	5.39E-01
		Phase 1 Truck Route	3.44	1.19E-06	4.12E-06	
	2027	Phase 1 On-Site	101.86	5.01E-03	5.10E-01	5.10E-01
		Phase 1 Truck Route	3.44	4.38E-07	1.51E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						

Maximum Exposed Receptor (MER) UTM coordinates: 480524.44E, 3739378.14N

[1] Model Output (Appendix B) at the MER based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Appendix A - Construction Emissions).

Table C4
Quantification of Health Risks for Off-site Sky View ES Outdoor Student
Construction Emissions

Source		MER	Weight	Contaminant			Dose (by age bin)	Carcinogenic Risks (by age bin)	Total Cancer Risk	Chronic Hazards [1]	
		Conc.	Fraction		URF	CPF	2<9 years	2<9 years		Chronic REL	RESP
		(µg/m^3)			(µg/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)	per million	per million	(µg/m^3)	
(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Sky View Elementary School Student - Outdoors											
2025		7.00E-01	1.00E+00	DPM	3.0E-04	1.1E+00	2.21E-04	6.55E+00	6.55E+00	5.0E+00	1.40E-01
2026		5.10E-01	1.00E+00				1.61E-04	3.75E+00	3.75E+00		1.02E-01
									10.299		**0.242**
Sky View Elementary School Student - Outdoors - Mitigated Run: Tier 4 Interim Engines for eq. > 50 HP (Demo, Site Prep, & Grading) - MM AQ-1											
2025		5.39E-01	1.00E+00	DPM	3.0E-04	1.1E+00	1.70E-04	5.04E+00	5.04E+00	5.0E+00	1.08E-01
2026		5.10E-01	1.00E+00				1.61E-04	3.75E+00	3.75E+00		1.02E-01
									8.789		**0.210**

Maximum Exposed Receptor (MER) UTM coordinates: 480524.44E, 3739378.14N

	OEHHA age bin [2]	2 < 9 years
	exposure year(s)	2025-2026
Dose Exposure Factors:	exposure frequency (days/year) [3]	180
	8-hour inhalation rate (L/kg-day) [4]	640
	inhalation absorption factor	1
	conversion factor (mg/µg; m^3/L)	1.0E-06
Risk Calculation Factors:	age sensitivity factor	3
	averaging time (years)	70
	per million	1.0E+06

	exposure durations (year) [5]	
Construction Year	2 < 9 years	Total
2025	0.66	0.66
2026	0.52	0.52
		1.18

[1] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

[2] Sky View Elementary School includes grade levels from preschool to the 6th grade.

3 Office of Environmental Heaht Hazard Assessment. 2004, February. Guidance for School Site Risk Assessment Pursuant to Health and Safety Code Section 901(f): Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites.

[4] Inhalation rate taken as the 8-hour 95th percentile breathing rates, Moderate Activity (OEHHA, 2015).

[5] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissio

Table C5
Sky View ES Indoor Student MER Concentrations for Construction Risk Calculations

Contaminant (a)	Source (b)		Model Output [1] (µg/m^3) (c)	Emission Rates [2] (g/s) (d)	MER Conc. (µg/m^3) (e)	Total MER Conc. Annual Average (µg/m^3) (f)
Sky View Elementary School Student - Indoors						
DPM	2025	On-Site	53.12	6.87E-03	3.65E-01	3.65E-01
		Truck Route	12.96	1.24E-06	1.60E-05	
	2026	On-Site	53.12	5.01E-03	2.66E-01	2.66E-01
		Truck Route	12.96	4.38E-07	5.67E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						
Sky View Elementary School Student - Indoors - Mitigated Run: Tier 4 Interim Engines for eq. > 50 HP (Demo, Site Prep, &						
DPM	2025	On-Site	53.12	5.29E-03	2.81E-01	2.81E-01
		Truck Route	12.96	1.19E-06	1.55E-05	
	2026	On-Site	53.12	5.01E-03	2.66E-01	2.66E-01
		Truck Route	12.96	4.38E-07	5.67E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						

Maximum Exposed Receptor (MER) UTM coordinates: 480510.12E, 3739444.88N

[1] Model Output (Appendix B) at the MER based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Appendix A - Construction Emissions).

Table C6
Quantification of Health Risks for Off-site Sky View ES Indoor Student Construction Emissions

Source	MER Conc. ($\mu g/m^3$)	Weight Fraction	Contaminant	URF $(\mu g/m^3)^{-1}$	CPF $(mg/kg/day)^{-1}$	Dose (by age bin) 2<9 years (mg/kg-day)	Carcinogenic Risks (by age bin) 2<9 years per million	Total Cancer Risk per million	Chronic Hazards [1] Chronic REL ($\mu g/m^3$)	RESP
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Sky View Elementary School Student - Indoors										
2025	3.65E-01	1.00E+00	DPM	3.0E-04	1.1E+00	1.15E-04	3.42E+00	3.42E+00	5.0E+00	7.30E-02
2026	2.66E-01	1.00E+00				8.40E-05	1.95E+00	1.95E+00		5.32E-02
								5.371		**0.126**
Sky View Elementary School Student - Indoors - Mitigated Run: Tier 4 Interim Engines for eq. > 50 HP (Demo, Site Prep, & Grading) - MM AQ-1										
2025	2.81E-01	1.00E+00	DPM	3.0E-04	1.1E+00	8.87E-05	2.63E+00	2.63E+00	5.0E+00	5.62E-02
2026	2.66E-01	1.00E+00				8.40E-05	1.95E+00	1.95E+00		5.32E-02
								4.584		**0.109**

Maximum Exposed Receptor (MER) UTM coordinates: 480510.12E, 3739444.88N

	OEHHA age bin [2]	2 < 9 years
	exposure year(s)	2025-2026
Dose Exposure Factors:	exposure frequency (days/year) [3]	180
	8-hour inhalation rate (L/kg-day) [4]	640
	inhalation absorption factor	1
	conversion factor (mg/µg; m^3/L)	1.0E-06
Risk Calculation Factors:	age sensitivity factor	3
	averaging time (years)	70
	per million	1.0E+06

Construction Year	exposure durations (year) [5] 2 < 9 years	Total
2025	0.66	0.66
2026	0.52	0.52
		1.18

[1] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

[2] Sky View Elementary School includes grade levels from preschool to the 6th grade.

3 Office of Environmental Heaht Hazard Assessment. 2004, February. Guidance for School Site Risk Assessment Pursuant to Health and Safety Code Section 901(f): Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites.

[4] Inhalation rate taken as the 8-hour 95th percentile breathing rates, Moderate Activity (OEHHA, 2015).

[5] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissio

Appendix

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Appendix C Noise and Vibration Background and Modeling Data

Appendix

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Fundamentals of Noise

NOISE

Noise is most often defined as unwanted sound; whether it is loud, unpleasant, unexpected, or otherwise undesirable. 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."

Noise Descriptors

The following are brief definitions of terminology used in this chapter:

- **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, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μPa).
- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ in/sec).
- **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."

- **Maximum Sound Level (L_{max})**. The highest RMS sound level measured during the measurement period.
- **Root Mean Square Sound Level (RMS).** The square root of the average of the square of the sound pressure over the measurement period.
- **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. NOTE: 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 rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
- **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.

Characteristics of Sound

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1 presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). 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 discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

Table 1 Noise Perceptibility

Change in dB	Noise Level
± 3 dB	Barely perceptible increase
± 5 dB	Readily perceptible increase
± 10 dB	Twice or half as loud
± 20 dB	Four times or one-quarter as loud

Source: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are "felt" more as a vibration. Similarly, though 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.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people's judgments of the "noisiness" of different sounds and has been used for many years as a measure of community and industrial noise. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Duration

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

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00

PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 79 dBA, and at 200 feet it would be 73 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a reflective ("hard site") surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dB for each doubling of distance.

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 the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 2 shows typical noise levels from familiar sources.

Table 2 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: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. As with noise, vibration can be described by both its amplitude and frequency. Vibration displacement is the distance that a point on a surface moves away from its original static position; velocity is the instantaneous speed that a point on a surface moves; and acceleration is the rate of change of the speed. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage and RMS is typically more suitable for evaluating human response.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 3 displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 3 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (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: California Department of Transportation (Caltrans). 2020, April. *Transportation and Construction Vibration Guidance Manual.* Prepared by ICF International.

LOCAL REGULATIONS AND STANDARDS

Noise Element

(City Council Adoption – August 30, 2005)
(2014 March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan Amendment - City Council Adoption– August 30, 2016)

Table of Contents

List of Tables

List of Exhibits

List of Appendices

State of California Regulations

California Code of Regulations, Part 2, Title 24, Appendix Chapter 35, Section 3501 establishes the State Noise Insulation Standards, which limit the interior noise level exposure within new hotels, motels, dormitories, long-term care facilities, apartment houses and dwellings. This state standard indicates that interior noise levels attributable to exterior noise sources shall not exceed 45 dB (CNEL or Ldn) in any habitable room.

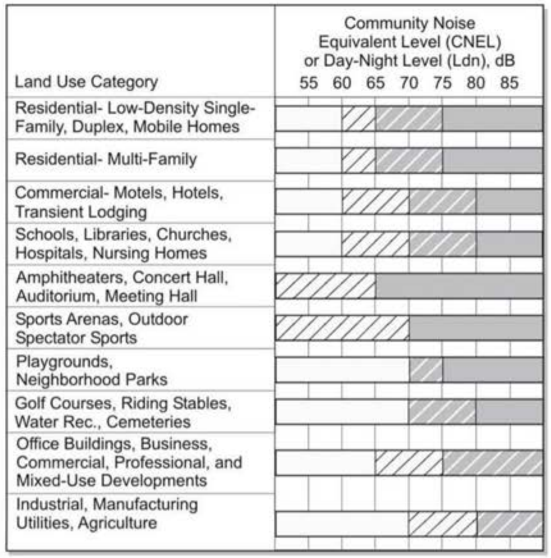
Exhibit N-1 presents a land use compatibility chart for community noise prepared by the State of California, Department of Health. It identifies normally acceptable, conditionally acceptable and clearly unacceptable noise levels for siting various new land uses. A conditionally acceptable designation 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 the 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.

Municipal Code

Chapter 16.22 of the Perris Municipal Code regulates new development including "sensitive receptors" located near arterials, railroads and the airport. "Sensitive receptors" refers to types of land uses that are adversely affected by various noise sources. Such land uses are defined in Section 16.22.020 of the Municipal Code to include: residences, schools, libraries, hospitals, churches, offices, hotels, motels, and outdoor recreational areas. Factors used to define sensitive receptors include the potential for interference with speech communication, the need for freedom from noise intrusion, the potential for sleep interference, and subjective judgment.

"Noise impacted projects" are defined as residential projects, or portions thereof, which are exposed to an exterior noise level of 60 dBA CNEL or greater. Such projects must include noise insulation design and construction assemblies that achieve an exterior-to-interior noise reduction sufficient to keep interior noise levels to a maximum of 45 dBA CNEL. This standard applies to any habitable room furnished for normal use with doors and windows closed. Specific construction techniques and materials that will achieve various levels of noise reduction are defined. Specifications for preparation of an acceptable acoustical report are also defined.

Exhibit N-1: Land Use/Noise Compatibility Guidelines



Nature of the noise environment where the CNEL or Ldn level is:

Below 55 dB
Relatively quiet suburban or urban areas, no arterial streets within 1 block, no freeways within 1/4 mile.

55-65 dB
Most somewhat noisy urban areas, near but not directly adjacent to high volumes of traffic.

65-75 dB
Very noisy urban areas near arterials, freeways or airports.

75+ dB
Extremely noisy urban areas adjacent to freeways or under airport traffic patterns. Hearing damage with constant exposure outdoors.

Normally Acceptable

Specific land use is satisfactory, based on the assumption that any building is of normal conventional construction, without any special noise insulation requirements

Conditionally Acceptable

New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in design.

Clearly Unacceptable

New construction or development should generally not be undertaken.

The Community Noise Equivalent Level (CNEL) and Day-Night Noise Level (Ldn) are measures of the 24-hour noise environment. They represent the constant A-weighted noise level that would be measured if all the sound energy received over the day were averaged. In order to account for the greater sensitivity of people to noise at night, the CNEL weighting includes a 5-decibel penalty on noise between 7:00 p.m. and 10:00 p.m. and a 10-decibel penalty on noise between 10:00 p.m. and 7:00 a.m. of the next day. The Ldn includes only the 10-decibel weighting for late-night noise events. For practical purposes, the two measures are equivalent for typical urban noise environments.

Source: State of California, Department of Health, City of Monterey Park.

The Orange Empire Railway Museum operates a tourist train service that shuttles passengers between the downtown area and the Orange Empire Railway Museum along a spur that begins at an intersection with the main tracks just north of 7th Street and runs southward to the museum south of Mountain Avenue. Service is offered every half-hour between 9 AM and 6 PM on Saturdays and Sundays. Additional service is offered on holidays and by charter on weekdays. A typical train includes a locomotive with 2 to 4 railcars. Individual trolley cars are also part of this tourist service line.

At-grade crossings for the main line operated by BNSF freight service are located at: San Jacinto Avenue, 2nd Street, 4th Street, D Street, Perris Boulevard, and Case/Mapes Road. At-grade rail crossings for the tourist train service occur at 7th Street, 11th Street, and Ellis Avenue.

March Inland Port Noise Review

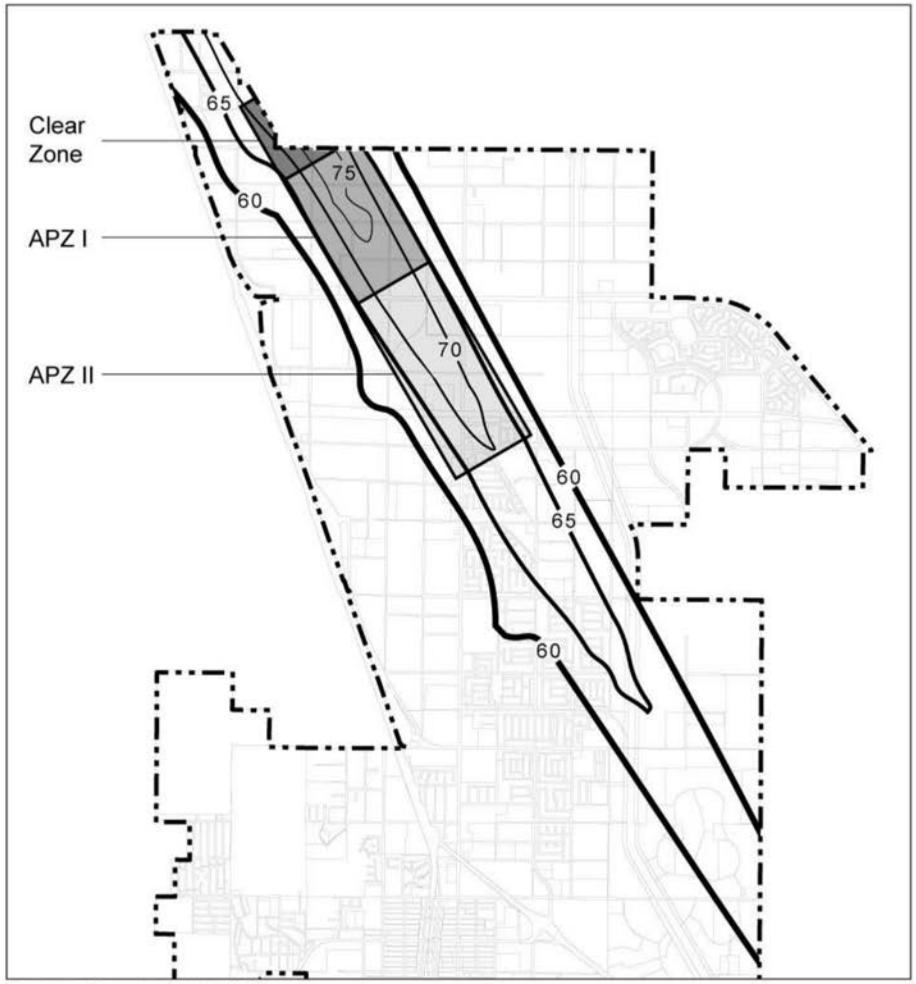
Located immediately north of the planning area, the March Inland Port is a joint military/civilian use air transport facility, that includes air cargo freight traffic. This facility is expected to play an increasingly important role in transportation of goods and cargo for the southern California region. Existing flight patterns affect a large portion of Perris, along a path that bisects the planning area in a northwest/southeast alignment. Noise contours above 65 dBA CNEL fall within several existing residential neighborhoods located east of Perris Boulevard, between Rider Street and Nuevo Road. Noise contours and accident potential zones associated with air traffic projected onto the Perris planning area are shown in Exhibit 17 of the Safety Element.

Perris Valley Airport Noise Review

The privately-operated Perris Valley Airport is a center for skydiving enthusiasts from throughout the western United States and has operated in its present location for many years. Aircraft typically consist of Twin Otter Turbo Prop, 20-passenger planes equipped with jet engines and propellers. On a peak weekend skydiving day, with optimal weather conditions and a day-long stream of skydiving customers, approximately 60 separate flights may occur. There are occasional night flights, according to the facility operator. Use of a DC-9 jet is planned for higher altitude skydiving excursions.

Modeling of 24-hour average noise contours associated with air traffic originating at this facility was not performed as part of this analysis; however, the noise levels measured at monitoring locations NR-11 and NR-12 are indicative of a range of noise levels that occur within the flight paths, for various numbers of minutes, at various times of the day.

Exhibit N-3: Noise Contours and Accident Potential Zones for March Inland Port



Source: United States Air Force AICUZ Study, 1998.

Legend

—#— Contour Lines

City Boundary

Key Map

Not to Scale

Railroad Noise Impacts on Existing Land Uses

Like auto traffic, railroad traffic is also expected to increase during the build out period. The Riverside County Transportation Commission (RCTC) reports that Metrolink commuter service is estimated to begin service in the area by 2008-2009, with 8 trains per day. These operations are projected to increase to 16 trains per day by the year 2030. By this time the rails are to be upgraded to continuous welded rail to accommodate the Metrolink service.

Metrolink trains are expected to be composed of one engine and three railcars. Metrolink speed through the project area is estimated at 30 mph and no night operations are expected.

Freight train operations are expected to double to four trains per day by the year 2030. This analysis assumes no change to the current average three engines and 25 railcars through the project area. Train speed is assumed to be 10 mph and half of the operations are assumed to occur between 10:00 PM and 7:00 AM

Future train noise was modeled using the "Wyle" method, which is discussed in Appendix C. Modeling results indicate that the noise associated with future Metrolink operations and two additional freight trains per day would increase noise levels along the tracks by approximately 3.5 to 4 dBA CNEL. Noise levels along the rail segments between the at grade rail crossings are projected to increase from 62.5 to 66 dBA within 200 feet of the centerline of the tracks, while noise levels at grade rail crossings are projected to increase from 72.5 to 76.5 dBA, within 200 feet of the centerline of the tracks. Any existing sensitive receptors within 200 Feet of any rail segment would thus be exposed to a significant, long-term increase in train noise.

To facilitate future Metrolink commuter service, the City has adopted a specific plan for the downtown area that calls for the removal of the crossings at 2nd Street, 5th Street and 6th Street, thereby removing the warning requirement and whistle noise in those locations.

Railroad Noise Impacts on Future Land Uses

Railroad noise modeling predicts that the future 60 dBA CNEL noise level falls at a distance of approximately 502 feet from the centerline of the tracks. This distance is extended to approximately 2,518 feet at grade crossings where a warning horn is sounded. Any noise-sensitive land uses proposed within these distances would require some form of noise attenuation to reduce exterior and interior noise exposure to the levels required by the Perris Municipal Code, Chapter 16.22.

Areas designated in the proposed Land Use Plan for noise-sensitive development along the rail line include land along the west side of Case Road and undeveloped parcels within the downtown area between Nuevo Road and 11th Street. Sensitive land uses may be located within a 502-foot distance to the 60 dBA noise level area, along segments of rail where no at grade crossings occur e.g. west of Case Road. At grade rail crossings, sensitive land uses must be located at a minimum of 2,518 feet from the crossing.

Perris Auto Speedway Impacts on Existing Land Uses

The speedway is located within State-owned park-land and is not subject to the land use policy restrictions set forth in the

Perris General Plan. The General Plan will have no effect on operations at the Speedway and as a result will not have any effect on noise levels generated at the Speedway. These noise levels could negatively impact existing sensitive land uses located to the south, at the nearest edge of May Ranch.

Perris Auto Speedway Impacts on Future Land Uses

The 65 and 60 dBA CNEL noise levels measured from the Speedway fall at distances of 2,040 and 3,628, respectively. New residential development is designated in the Land Use Plan south of Ramona Expressway, within 3,628 feet from the speedway located in the 60 dBA CNEL.

To avoid exposing future homes to significant speedway noise impacts, acoustical studies will be required in conjunction with new development proposals in the 60 dBA CNEL area designated above. The acoustical studies will help identify measures to mitigate exterior and interior noise exposure in accordance with Chapter 16.22 of the Municipal Code and the Noise/Land Use Compatibility Guidelines illustrated in Exhibit N-1.

Air Traffic Noise Impacts

New residential development is planned within the flight pattern located south of The Perris Valley Airport, between Goetz Road and Murrieta Avenue, in the southern edge of the planning area. Additional residential development is planned in the downtown area, within the northern flight path for aircraft departing from the Perris Valley Airport. Future homes in both areas would be exposed to overflight noise impacts that could occur up to 60 times a day on peak days.

The Land Use Plan designates considerable land area for residential development within the March Inland Port flight patterns, including land within the 65 dBA and higher CNEL contours, as illustrated in Exhibit N-3. Acoustical studies will be required to identify appropriate site design and building design measures to reduce exterior and interior noise exposure associated with air traffic originating at March Inland Port, to those levels specified in Chapter 16.22 of the Municipal Code and the /Land Use Compatibility Guidelines illustrated in Exhibit N-1.

Noise Compatibility between Different Land Uses

There are a number of areas where the Land Use Plan identifies adjoining residential and commercial or industrial uses. The potential for noise incompatibilities will exist along those edges, where the commercial or industrial uses contain exterior operations, such as truck loading areas and large parking lots. In these situations normal business operations could generate substantial noise levels on adjoining residential properties.

Significant noise impacts can be avoided through site design and operational controls that place exterior activities away from residential properties. For example; prohibit exterior operations, including truck loading/ unloading, during more sensitive later night and early morning hours. This issue can be minimized through careful consideration of potential noise impacts during the project site plan process.

Strategy for Action

Goals, Policies and Implementation Measures

Goal I – Land Use Siting

Future land uses compatible with projected noise environments

Policy I.A
The State of California Noise/Land Use Compatibility Criteria shall be used in determining land use compatibility for new development.

Implementation Measures

I.A.1 All new development proposals will be evaluated with respect to the State Noise/Land Use Compatibility Criteria. Placement of noise sensitive uses will be discouraged within any area exposed to exterior noise levels that fall into the "Normally Unacceptable" range and prohibited within areas exposed to "Clearly Unacceptable" noise ranges.

I.A.2 Site plans for new residential development near roadway and train noise sources shall incorporate increased building setbacks and/or provide for sufficient noise barriers for usable exterior yard areas so that the noise exposure in those areas does not exceed the levels considered "Normally Acceptable" in The State of California Noise/Land Use Compatibility Criteria

I.A.3 Acoustical studies shall be prepared for all new development proposals involving noise sensitive land uses, as defined in Section 16.22.020J of the Perris Municipal Code, where such projects are adjacent to roadways and within existing or projected roadway CNEL levels of 60 dBA or greater.

I.A.4 As part of any approvals of noise sensitive projects where reduction of exterior noise to 65 dBA is not reasonably feasible, the City will require the developer to issue disclosure statements to be identified on all real estate transfers associated with the affected property that identifies regular exposure to roadway noise.

I.A.5 No new residential dwellings shall be placed in areas with mitigated or unmitigated exterior noise levels that exceed 70 dBA CNEL.

Goal II – Existing Sensitive Receptors

Roadway improvements compatible with existing with existing noise-sensitive land uses

Policy II.A
Appropriate measures shall be taken in the design phase of future roadway widening projects to minimize impacts on existing sensitive noise receptors.

Implementation Measures

II.A.1 In the design of future roadway widening projects adjacent to existing sensitive land uses, first priority will be given to widening on the opposite side of the street where no sensitive land uses occur.

II.A.2 Use of quieter roadway surface materials, incorporation of solid noise barriers between the sensitive land use and the roadway will be implemented where feasible, to reduce exterior noise levels within adjacent sensitive land uses to a maximum of 60 dBA CNEL.

II.A.3 Where construction of a solid barrier is economically or practically infeasible e.g. along front yards where driveways would prohibit continuation of the wall, retrofitting of homes with noise attenuation features will be implemented to reduce interior noise to 45 dBA CNEL.

II.A.4 Reduction of posted speed limits will be implemented, wherever it can be accomplished without increasing traffic congestion.

II.A.5 Work proactively with Caltrans to facilitate construction of sound barriers and/or retrofit existing noise impacted structures with noise attenuation features, along those segments of I-215 that abut existing noise impacted land uses.

Goal III – Train Noise

Future land uses compatible with noise from rail traffic

Policy III.A
Mitigate existing and future noise impacts resulting from train movement.

Implementation Measures

III.A.1 The City will work proactively with BNSF and Riverside County Transportation Commission to replace aging rail with new continuous welded rail, and to install sound-deadening matting leading to, from, and between the rails where public roads cross tracks in residential areas

III.A.2 Acoustical and vibration studies will be prepared for all new development proposals involving noise sensitive land uses within 500 feet of the BNST railroad tracks. Wherever these studies determine that exterior living areas in the proposed development plan would be exposed to noise levels of 60 dBA or greater, the plans shall incorporate setbacks and/or building design/noise insulation measures to reduce exterior noise levels to no more than 65 dBA and ensure that interior noise levels do not exceed 45 dBA CNEL.

III.A.3 As part of any approvals of noise sensitive projects where reduction of exterior noise to 65 dBA is not reasonably feasible, the City will require the developer to issue disclosure statements that identify regular exposure to train noise. This disclosure shall be issued at the time of initial and all subsequent sales of the affected properties.

III.A.4 No new residential dwellings shall be placed in areas with mitigated or unmitigated exterior exposure to train noise levels in excess of 70 dBA CNEL.

Goal IV – Air Traffic Noise

Future land uses compatible with noise from air traffic

Policy IV.A
Reduce or avoid the existing and potential future impacts from air traffic on new sensitive noise land uses in areas where air traffic noise is 60 dBA CNEL or higher.

Implementation Measures

IV.A.1 As part of any approvals for new sensitive land uses within the 60 dBA CNEL or higher noise contours associated with March Inland Port, and for such new uses within the flight paths associated with the Perris Valley Skydiving Center, the City will require the developer to issue disclosure statements identifying exposure to regular aircraft noise. This disclosure shall be issued at the time of initial and all subsequent sales of the affected properties.

IV.A.2 All new development proposals in the noise contour areas of 60 dBA and above will be evaluated with respect to the State Noise/Land Use Compatibility Criteria.

Goal V – Stationary Source Noise

Future non-residential land uses compatible with noise sensitive land uses

Policy V.A
New large scale commercial or industrial facilities located within 160 feet of sensitive land uses shall mitigate noise impacts to attain an acceptable level as required by the State of California Noise/Land Use Compatibility Criteria.

Implementation Measures

V.A.1 An acoustical impact analysis shall be prepared for new industrial and large scale commercial facilities to be constructed within 160 feet of the property line of any existing noise sensitive land use. This analysis shall document the nature of the commercial or industrial facility as well as all interior or exterior facility operations that would generate exterior noise.
The analysis shall document the placement of any existing or proposed noise-sensitive land uses situated within the 160-foot distance. The analysis shall determine the potential noise levels that could be received at these sensitive land uses and specify specific measures to be employed by the large scale commercial or industrial facility to ensure that these levels do not exceed 60 dBA CNEL at the property line of the adjoining sensitive land use.
No development permits or approval of land use applications shall be issued until the acoustic analysis is received and approved by the City Staff.

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CHAPTER 7.34. - NOISE CONTROL

Sec. 7.34.010. - Declaration of policy.

Excessive noise levels are detrimental to the health and safety of individuals. Noise is considered a public nuisance, and the city discourages unnecessary, excessive or annoying noises from all sources. Creating, maintaining, causing, or allowing to be created, caused or maintained, any noise or vibration in a manner prohibited by the provisions of the ordinance codified in this chapter is a public nuisance and shall be punishable as a misdemeanor.

(Code 1972, § 7.34.010; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.020. - Definitions.

(a) *General.* The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Ambient noise means the all-encompassing noise associated with a given environment usually being composed of sounds from many sources near and far. For the purpose of this chapter, ambient noise level is the level obtained when the noise level is averaged over a period of five minutes without inclusion of noise from isolated identifiable sources at the location and time of day near that at which a comparison is to be made.

Decibel (dB) means an intensity unit which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio is ten times the common logarithm of this ratio.

Sound amplifying equipment means any machine or device for the amplification of the human voice, music or any other sound. The term "sound amplifying equipment" does not include standard vehicle radios when used and heard only by the occupants of the vehicle in which the vehicle radio is installed. The term "sound amplifying equipment," as used in this chapter, does not include warning devices on any vehicle used only for traffic safety purposes and shall not include communications equipment used by public or private utilities when restoring utility service following a public emergency or when doing work required to protect person or property from an imminent exposure to danger.

Sound level (noise level) in decibels is the value of a sound measurement using the "A" weighting network of a sound level meter. Slow response of the sound level meter needle shall be used except where the sound is impulsive or rapidly varying in nature, in which case, fast response shall be used.

Sound level meter means an instrument, including a microphone, an amplifier, an output meter and frequency weighting networks, for the measurement of sound levels, which satisfies the pertinent requirements in American National Standards Institute's specification S1.4-1971 or the most recent revision for type S-2A general purpose sound level meters.

(b) *Supplementary definitions of technical terms.* Definitions of technical terms not defined in this section shall be obtained from the American National Standards Institute's Acoustical Terminology S1-1971 or the most recent revision thereof.

(Code 1972, § 7.34.020; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.030. - Measurement methods.

(a) Sound shall be measured with a sound level meter as defined in section 7.34.020.

(b) Unless otherwise provided, outdoor measurements shall be taken with the microphone located at any point on the property line of the noise source but no closer than five feet from any wall or vertical obstruction and three to five feet above ground level whenever possible.

(c) Unless otherwise provided, indoor measurements shall be taken inside the structure with the microphone located at any point as follows:

(1) No less than three feet above floor level;

(2) No less than five feet from any wall or vertical obstruction; and

(3) Not under common possession and control with the building or portion of the building from which the sound is emanating.

(Code 1972, § 7.34.030; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.040. - Sound amplification.

No person shall amplify sound using sound amplifying equipment contrary to any of the following:

(1) The only amplified sound permitted shall be either music or the human voice, or both.

(2) The volume of amplified sound shall not exceed the noise levels set forth in this subsection when measured outdoors at or beyond the property line of the property from which the sound emanates.

Time Period	Maximum Noise Level
10:01 p.m.—7:00 a.m.	60 dBA
7:01 a.m.—10:00 p.m.	80 dBA

(Code 1972, § 7.34.040; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.050. - General prohibition.

(a) It unlawful for any person to willfully make, cause or suffer, or permit to be made or caused, any loud excessive or offensive noises or sounds which unreasonably disturb the peace and quiet of any residential neighborhood or which are physically annoying to persons of ordinary sensitivity or which are so harsh, prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of the city, or any section thereof. The standards for dBA noise level in section 7.34.040 shall apply to this section. To the extent that the noise created causes the noise level at the property line to exceed the ambient noise level by more than 1.0 decibels, it shall be presumed that the noise being created also is in violation of this section.

(b) The characteristics and conditions which should be considered in determining whether a violation of the provisions of this section exists should include, but not be limited to, the following:

(1) The level of the noise;

(2) Whether the nature of the noise is usual or unusual;

(3) Whether the origin of the noise is natural or unnatural;

(4) The level of the ambient noise;

(5) The proximity of the noise to sleeping facilities;

(6) The nature and zoning of the area from which the noise emanates and the area where it is received;

(7) The time of day or night the noise occurs;

(8) The duration of the noise; and

(9) Whether the noise is recurrent, intermittent or constant.

(Code 1972, § 7.34.050; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.060. - Construction noise.

It is unlawful for any person between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on a legal holiday, with the exception of Columbus Day and Washington's birthday, or on Sundays to erect, construct, demolish, excavate, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise. Construction activity shall not exceed 80 dBA in residential zones in the city.

(Code 1972, § 7.34.060; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.070. - Refuse vehicles and parking lot sweepers.

No person shall operate or permit to be operated a refuse compacting, processing or collection vehicle or parking lot sweeper between the hours of 7:00 p.m. to 7:00 a.m. in any residential area unless a permit has been applied for and granted by the city.

(Code 1972, § 7.34.070; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.080. - Disturbing, excessive, offensive noises; declaration of certain acts constituting.

The following activities, among others, are declared to cause loud, disturbing, excessive or offensive noises in violation of this section and are unlawful, namely:

(1) *Horns, signaling devices, etc.* Unnecessary use or operation of horns, signaling devices or other similar devices on automobiles,

motorcycles or any other vehicle.

(2) *Radios, television sets, phonographs, loud speaking amplifiers and similar devices.* The use or operation of any sound production or reproduction device, radio receiving set, musical instrument, drums, phonograph, television set, loudspeakers, sound amplifier, or other similar machine or device for the producing or reproducing of sound, in such a manner as to disturb the peace, quiet or comfort of any reasonable person of normal sensitivity in any area of the city is prohibited. This provision shall not apply to any participant in a licensed parade or to any person who has been otherwise duly authorized by the city to engage in such conduct.

(3) *Animals.*

a. The keeping or maintenance, or the permitting to be kept or maintained, upon any premises owned, occupied or controlled by any person of any animal or animals which by any frequent or long-continued noise shall cause annoyance or discomfort to a reasonable person of normal sensitiveness in the vicinity.

b. The noise from any such animal or animals that disturbs two or more residents residing in separate residences adjacent to any part of the property on which the subject animal or animals are kept or maintained, or three or more residents residing in separate residences in close proximity to the property on which the subject animal or animals are kept or maintained, shall be prima facie evidence of a violation of this section.

(4) *Hospitals, schools, libraries, rest homes, long-term medical or mental care facilities.* To make loud, disturbing, excessive noises adjacent to a hospital, school, library, rest home or long-term medical or mental care facility, which noise unreasonably interferes with the workings of such institutions or which disturbs or unduly annoys occupants in said institutions.

(5) *Playing of radios on buses and trolleys.* The operation of any radio, phonograph or tape player on an urban transit bus or trolley so as to emit noise that is audible to any other person in the vehicle is prohibited.

(6) *Playing of radios, phonographs and other sound production or reproduction devices in public parks and public parking lots and streets adjacent thereto.* The operation of any radio, phonograph, television set or any other sound production or reproduction device in any public park or any public parking lot, or street adjacent to such park or beach, without the prior written approval of the city manager or the administrator, in such a manner that such radio, phonograph, television set or sound production or reproduction device emits a sound level exceeding those found in the table in section 7.34.040.

(7) *Leaf blowers.*

a. The term "leaf blower" means any portable, hand-held or backpack, engine-powered device with a nozzle that creates a directable airstream which is capable of and intended for moving leaves and light materials.

b. No person shall operate a leaf blower in any residential zoned area between the hours of 7:00 p.m. and 8:00 a.m. on weekdays and 5:00 p.m. and 9:00 a.m. on weekends or on legal holidays.

c. No person may operate any leaf blower at a sound level in excess of 80 decibels measured at a distance of 50 feet or greater from the point of noise origin.

d. Leaf blowers shall be equipped with functional mufflers and an approved sound limiting device required to ensure that the leaf blower is not capable of generating a sound level exceeding any limit prescribed in this section.

(Code 1972, § 7.34.080; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.090. - Burglar alarms.

(a) Audible burglar alarms for structures or motor vehicles are prohibited unless the operation of such burglar alarm can be terminated within 20 minutes of being activated.

(b) Notwithstanding the requirements of this provision, any member of the county sheriff's department, Perris Division, shall have the right to take such steps as may be reasonable and necessary to disconnect any such alarm installed in any building, dwelling or motor vehicle at any time during the period of its activation. On or after 30 days from the effective date of the ordinance codified in this chapter, any building, dwelling or motor vehicle upon which a burglar alarm has been installed shall prominently display the telephone number at which communication may be made with the owner of such building, dwelling or motor vehicle.

(Code 1972, § 7.34.090; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.100. - Motor vehicles.

(a) Off-highway.

(1) Except as otherwise provided for in this chapter, it shall be unlawful to operate any motor vehicle of any type on any site, other than on a public street or highway as defined in the California Vehicle Code, in any manner so as to cause noise in excess of those noise levels permitted for on-highway motor vehicles as specified in the table for "45-mile-per-hour or less speed limits"

contained in section 23130 of the California Vehicle Code and as corrected for distances set forth in subsection (a)(2) of this section.

(2) The maximum noise level as the on-highway vehicle passes may be measured at a distance of other than 50 feet from the centerline of travel, provided the measurement is further adjusted by adding algebraically the application correction as follows:

Distance (feet)	Correction (decibels)
25	−6
28	−5
32	−4
35	−3
40	−2
45	−1
50 (preferred distance)	0
56	+1
63	+2

70	+3
80	+4
90	+5
100	+6

(b) Nothing in this section shall apply to authorized emergency vehicles when being used in emergency situations including the blowing of sirens and/or horns.

(Code 1972, § 7.34.100; Ord. No. 1082, § 2(part), 2000)

CONSTRUCTION NOISE MODELING

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/05/2024
Case Description: PESD-02.0 Demolition

**** Receptor #1 ****

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
at 50 feet	Residential	65.0	60.0	55.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	50.0	0.0
Concrete Saw	No	20		89.6	50.0	0.0
Excavator	No	40		80.7	50.0	0.0

Results

			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	84.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/05/2024
Case Description: PESD-02.0 Site Preparation

**** Receptor #1 ****

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
at 50 feet	Residential	65.0	60.0	55.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84.0	81.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/05/2024
Case Description: PESD-02.0 Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
at 50 feet	Residential	65.0	60.0	55.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Backhoe	No	40		77.6	50.0	0.0
Excavator	No	40		80.7	50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	82.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/05/2024
Case Description: PESD-02.0 Building Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
at 50 feet	Residential	65.0	60.0	55.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	50.0	0.0
Welder / Torch	No	40		74.0	50.0	0.0
Generator	No	50		80.6	50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	74.0	70.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.6	79.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/05/2024
Case Description: PESD-02.0 Architectural Coating

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
at 50 feet	Residential	65.0	60.0	55.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/05/2024
Case Description: PESD-02.0 Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
at 50 feet	Residential	65.0	60.0	55.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	50.0	0.0
Roller	No	20		80.0	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.0	78.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

PESD-02.0 - Construction Noise Modeling Attenuation Calculations

Levels in dBA Leq

Phase	**RCNM Reference Noise Level**	**Residential Receptor to North**	**Residential Receptor to East**	**Recreational Receptor to South**	**Residential Receptor to West**
Distance in feet	*50*	*420*	*660*	*700*	*360*
Demolition	85	67	63	62	68
Site Prep	85	67	63	62	68
Grading	85	67	63	62	68
Distance in feet	*50*	*375*	*630*	*645*	*330*
Building Construction	80	62	58	58	64
Architectural Coating	74	56	52	52	58
Distance in feet	*50*	*320*	*550*	*635*	*290*
Paving	80	64	59	58	65

Attenuation calculated through Inverse Square Law: Lp(R2) = Lp(R1) - 20Log(R2/R1)

PESD-02.0 - Vibration Damage Attenuation Calculations

Levels, PPV (in/sec)					
Distance in feet	**Vibration Reference Level at *25 feet***	**Residential Receptor to North** *340*	**Residential Receptor to East** *425*	**Residential Receptor to West** *340*	**On-Campus Receptors** *75*
Vibratory Roller	0.21	0.004	0.003	0.004	0.040
Hoe Ram	0.089	0.002	0.001	0.002	0.017
Large Bulldozer	0.089	0.002	0.001	0.002	0.017
Loaded Trucks	0.076	0.002	0.001	0.002	0.015
Jackhammer	0.035	0.001	0.000	0.001	0.007
Small Bulldozer	0.003	0.000	0.000	0.000	0.001

TRAFFIC NOISE MODELING

Traffic Noise Calculator: FHWA 77-108 **Skyview Elementary School (PESD-02.0) Existing 2024 Traffic Noise**

	Output						Inputs															Auto Inputs	
	dBA at 50 feet			Distance to CNEL Contour																			
ID	$L_{eq\text{-}24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment From	Segment To	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance
1	55.5	58.3	58.5	9	18	40	Murrieta Road	the North	Mildred St	5,530	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
2	55.1	57.9	58.1	8	17	38	Murrieta Road	Mildred St	School Dwy	5,100	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
3	55.1	57.9	58.1	8	17	38	Murrieta Road	School Dwy	the South	5,100	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
4	51.7	54.5	54.8	5	10	22	Mildred Street	Wilson Ave	School Dwy	2,340	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
5	52.4	55.2	55.4	5	12	25	Mildred Street	School Dwy	Murrieta Rd	2,740	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
6	51.7	54.5	54.8	5	10	22	Wilson Avenue	Mildred St	the South	2,340	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20

Traffic Noise Calculator: FHWA 77-108							Skyview Elementary School (PESD-02.0) Existing Plus Project 2024 Traffic Noise																		
	Output						Inputs																	Auto Inputs	
	dBA at 50 feet			Distance to CNEL Contour																					
ID	$L_{eq\text{-}24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment From - To		ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever			Ground Absorption	Lane Distance
1	55.6	58.4	58.7	9	19	41	Murrieta Road	the North	Mildred St	5,750	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50			0.5	20
2	55.3	58.1	58.4	8	18	39	Murrieta Road	Mildred St	School Dwy	5,360	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50			0.5	20
3	55.4	58.2	58.4	8	18	39	Murrieta Road	School Dwy	the South	5,400	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50			0.5	20
4	52.1	54.9	55.2	5	11	24	Mildred Street	Wilson Ave	School Dwy	2,560	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50			0.5	20
5	52.9	55.7	55.9	6	12	27	Mildred Street	School Dwy	Murrieta Rd	3,040	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50			0.5	20
6	52.1	54.9	55.2	5	11	24	Wilson Avenue	Mildred St	the South	2,560	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50			0.5	20

Traffic Noise Calculator: FHWA 77-108							Skyview Elementary School (PESD-02.0) Future 2027 Traffic Noise																	
	Output						Inputs															Auto Inputs	
	dBA at 50 feet			Distance to CNEL Contour																			
ID	$L_{eq-24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment From - To		ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance
1	55.7	58.5	58.7	9	19	41	Murrieta Road	the North	Mildred St	5,860	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
2	55.4	58.2	58.4	8	18	39	Murrieta Road	Mildred St	School Dwy	5,410	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
3	55.4	58.2	58.4	8	18	39	Murrieta Road	School Dwy	the South	5,410	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
4	52.0	54.8	55.0	5	11	23	Mildred Street	Wilson Ave	School Dwy	2,480	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
5	52.7	55.5	55.7	6	12	26	Mildred Street	School Dwy	Murrieta Rd	2,900	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
6	52.0	54.8	55.0	5	11	23	Wilson Avenue	Mildred St	the South	2,480	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20

Traffic Noise Calculator: FHWA 77-108 **Skyview Elementary School (PESD-02.0) Future 2027 Plus Project Traffic Noise**

	Output						Inputs																Auto Inputs	
	dBA at 50 feet			Distance to CNEL Contour																				
ID	$L_{eq\text{-}24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment From - To		ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance
1	55.9	58.7	58.9	9	20	42	Murrieta Road	the North	Mildred St	6,080	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
2	55.6	58.4	58.6	9	19	40	Murrieta Road	Mildred St	School Dwy	5,670	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
3	55.6	58.4	58.6	9	19	41	Murrieta Road	School Dwy	the South	5,710	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
4	52.4	55.1	55.4	5	11	25	Mildred Street	Wilson Ave	School Dwy	2,700	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
5	53.1	55.9	56.1	6	13	28	Mildred Street	School Dwy	Murrieta Rd	3,200	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20
6	52.4	55.1	55.4	5	11	25	Wilson Avenue	Mildred St	the South	2,700	25	0.0%	98.0%	1.5%	0.5%	85.0%	5.0%	10.0%	2	Soft	50	0.5	20

STATIONARY NOISE MODELING

Appendix

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Appendix D Traffic/Transportation Impact Analysis

Appendix

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TRAFFIC/TRANSPORTATION IMPACT ANALYSIS

FOR THE PROPOSED

SKY VIEW ELEMENTARY SCHOOL CLASSROOM ADDITION

PERRIS ELEMENTARY SCHOOL DISTRICT

Prepared for

PERRIS ELEMENTARY SCHOOL DISTRICT
&
PLACEWORKS

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OCTOBER 2024

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

I.
INTRODUCTION AND STUDY METHODOLOGY

This report summarizes the results of a traffic/transportation impact analysis that was conducted for the Sky View Elementary School classroom building addition project proposed by Perris Elementary School District at 625 Mildred Street in Perris. The school site is located on the south side of Mildred Street west of Murrieta Road. The project location is shown on Figure 1 and the proposed site plan is shown on Figure 2.

The project includes the construction of a new two-story classroom building that would contain 10 classrooms and two labs. It would accommodate up to 324 additional students at the school. The project also includes an outdoor learning area, a fabric shade structure, and the relocation of three basketball courts.

An analysis has been prepared to evaluate the traffic/transportation impacts of the proposed school expansion project. The methodology for the traffic study, in general, was to address the transportation issue areas of the CEQA environmental checklist, which includes an evaluation of the project’s impacts on 1) transit, roadway, bicycle, and pedestrian facilities, 2) vehicle miles traveled (VMT), 3) increased hazards or incompatible uses, and 4) emergency access. An inventory was taken of the streets, sidewalks, bike lanes, and public transit routes in the vicinity of the school site, which included physical features such as the number of lanes, types of traffic control devices, and crosswalk locations. The increased volumes of traffic that would be generated by the expanded school were also quantified.

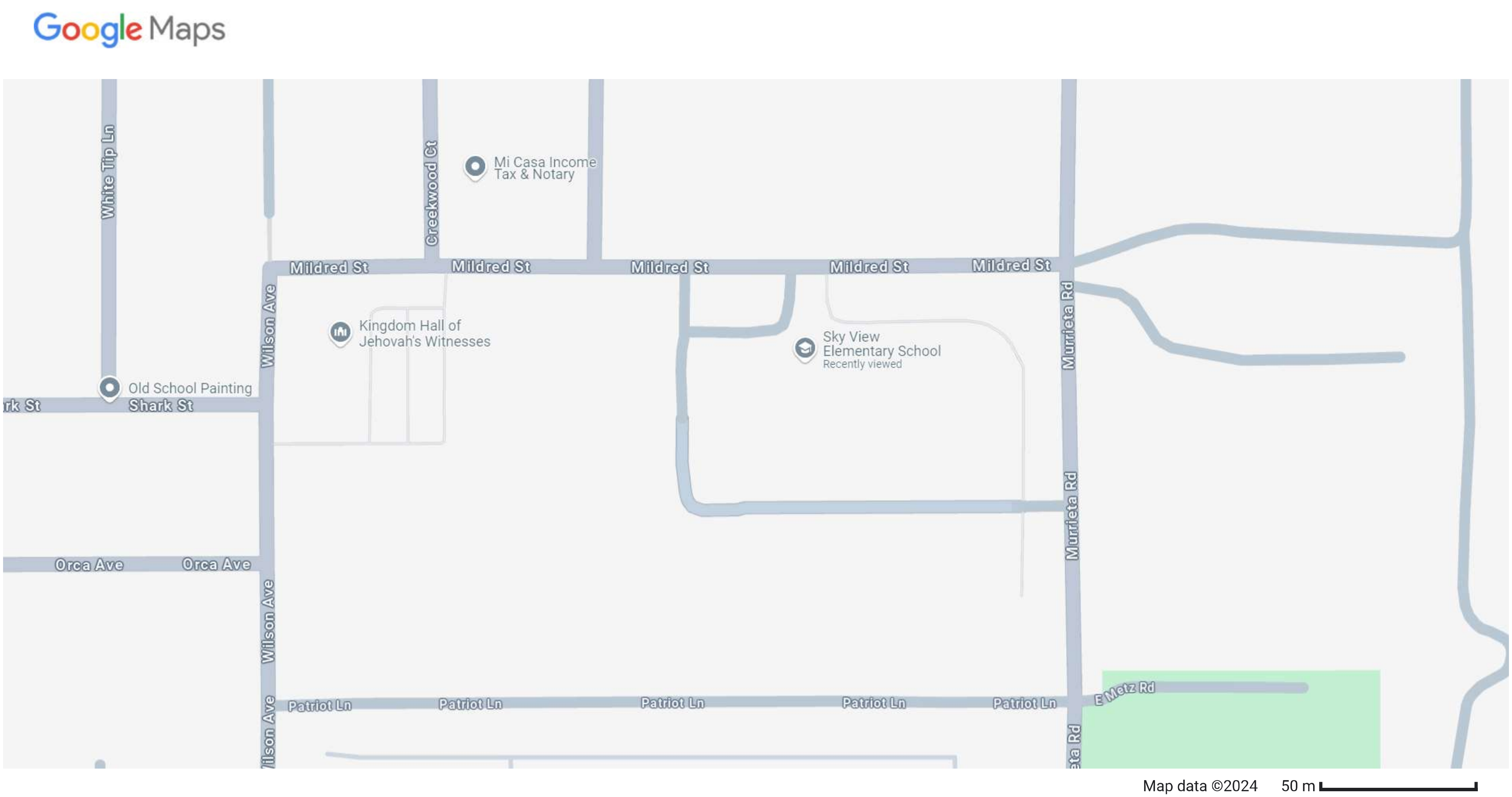

FIGURE 1
LOCATION MAP

Overall Site Plan

SKY VIEW ELEMENTARY SCHOOL CLASSROOM ADDITION

PERRIS ELEMENTARY SCHOOL DISTRICT | RCA #1-69-11

SCHEMATIC DESIGN

JULY 2024

2

RUHNAU CLARKE ARCHITECTS

FIGURE 2
SITE PLAN

II.
EXISTING TRAFFIC/TRANSPORTATION CONDITIONS

The street network in the vicinity of the school site (which includes sidewalks and bike lanes), an inventory of the types of traffic control devices and crosswalk locations, and the nearby bus transit routes are described below.

Street Network

The streets that provide access to the proposed project area include Mildred Street, Murrieta Road, and Wilson Avenue. The following paragraphs provide a brief description of the characteristics of these streets.

Mildred Street

Mildred Street is a two lane east-west street that abuts the north side of the school campus. Parking is provided on the south side of the street except for the area that abuts the west end of the school site, which has “No Stopping Any Time” restrictions. Parking can be accommodated on a shoulder on the north side of the street across from the school and parking is provided on both sides of the street west of the school site. Sidewalks are in place on the south side of the street along the school frontage and on both sides of the street west of the school site. There are no bike lanes on Mildred Street. The speed limit on Mildred Street is 25 miles per hour (mph).

There are three driveways on the south side of Mildred Street that provide access to school. The west driveway is the entry driveway for a student drop-off/pick-up area and the middle driveway is the exit from this area. The east driveway is the entry driveway to the school’s parking lot and a second drop-off/pick-up area.

Murrieta Road

Murrieta Road is a two lane north-south street that abuts the east side of the school campus. It has sidewalks on the west side of the street and no sidewalks on the east side. Parking is prohibited on both sides of the street and there are bike lanes along both sides of the street. There is a driveway on the west side of Murrieta Road south of Mildred Street that provides access to the school’s parking lot and serves as the exit from the drop-off/pick-up area. The speed limit on Murrieta Road is 25 mph.

Wilson Avenue

Wilson Avenue is a two lane north-south street located approximately 650 feet west of the school site. It has sidewalks and parking on both sides of the street and there are no bike lanes. The speed limit on Wilson Avenue is 25 mph.

Traffic Control and Crosswalks

The existing traffic control devices at the study area intersections are shown in Table 1.

TABLE 1
EXISTING TRAFFIC CONTROL DEVICES & CROSSWALKS

Intersection	***Traffic Control***	***Crosswalks***
Mildred Street / Murrieta Road	3-Way Stop Signs	On North, South, & West Legs
Mildred Street / Hollowood Court	3-Way Stop Signs	On North & East Legs
Mildred Street / Wilson Avenue	None	None

Bus Transit Service

Riverside Transit Agency (RTA) operates one bus route in the vicinity of the school site. Route 30 runs along Redlands Avenue and Nuevo Road. Redlands Avenue is approximately three-eighths of a mile west of the school site and Nuevo Road is approximately three-eighths of a mile north of the school site. There are no bus routes adjacent to the school site.

III.
TRAFFIC IMPACT ANALYSIS

This section summarizes the analysis of the proposed project's impacts on study area traffic/transportation conditions. First is a discussion of the significance standards followed by a discussion of project generated traffic volumes and the impact on daily traffic volumes. This is followed by an analysis of the impacts associated with non-motorized transportation (pedestrians and bicycles) and the findings relative to the CEQA transportation issues.

Standards of Significance

With regard to the CEQA thresholds of significance, Appendix G of the CEQA Guidelines states that a project would normally have a significant effect on the environment if the project could:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities,

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which addresses vehicle miles traveled (VMT),

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), or

d) Result in inadequate emergency access.

Project Generated Traffic

The volumes of traffic that would be generated by the additional classrooms and students at the school were determined in order to estimate the impacts of the proposed project. The trip generation rates and the anticipated volumes of traffic that would be generated by the proposed school building are shown in Table 2.

TABLE 2
PROJECT GENERATED TRAFFIC

School	Daily Traffic	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
TRIP GENERATION RATES (trips per student)							
Elementary School	2.27	0.75	54%	46%	0.45	46%	54%
GENERATED TRAFFIC VOLUMES							
Classroom Addition (324 students)	740	243	131	112	146	67	79

The trip generation rates shown in Table 2 are from the Institute of Transportation Engineers *Trip Generation Manual* for the elementary school land use category. Although the trip generation rates and traffic volumes shown in Table 2 for the school are based on the number of students, the data represent the total number of vehicle trips generated by the school, including staff/faculty vehicles, drop-off/pick-up activities, visitors, and deliveries.

Table 2 indicates that the project would generate a net increase of 243 vehicle trips during the morning peak hour (131 inbound and 112 outbound), 146 trips during the afternoon peak hour (67 inbound and 79 outbound), and 740 trips per day.

It should be noted that the traffic volumes shown in Table 2 do not necessarily introduce new traffic to the overall roadway network but instead represent the traffic that would be re-directed to this school site, because the number of students attending school in the district is a function of the school-age population and the demand for educational facilities. Most of the school-related traffic would be traveling on the roadway network regardless of the status of the proposed project. It has been assumed for the traffic analysis, however, that the additional site-generated traffic would be new traffic on the roadway network.

Impacts on Daily Traffic Volumes

The impacts of the project on daily traffic volumes are shown on Table 3 for Murrieta Road, Mildred Street, and Wilson Avenue. The existing conditions scenario and the year 2027 baseline scenario are shown. The daily traffic volume on Murrieta Road north of Mildred Street, for example, would increase from 5,530 vehicles per day (vpd) to 5,750 vpd for the existing conditions scenario, which is an increase of 220 vehicles per day. The year 2027 was used for the future baseline scenario because it is anticipated to be the first year that the expanded school would be occupied. The year 2027 traffic volumes were estimated by expanding the existing traffic volumes by 6 percent.

TABLE 3
PROJECT IMPACT ON DAILY TRAFFIC VOLUMES

Street/Location	***Without Project***	***Project Traffic***	***With Project***
EXISTING CONDITIONS AS BASELINE			
Murrieta Road			
North of Mildred Street	5,530	220	5,750
Mildred Street to School Driveway	5,100	260	5,360
South of School Driveway	5,100	300	5,400
Mildred Street			
Wilson Avenue to School Driveways	2,340	220	2,560
School Driveways to Murrieta Road	2,740	300	3,040
Wilson Avenue			
South of Mildred Street	2,340	220	2,560
YEAR 2027 AS BASELINE			
Murrieta Road			
North of Mildred Street	5,860	220	6,080

Mildred Street to School Driveway	5,410	260	5,670
South of School Driveway	5,410	300	5,710
Mildred Street			
Wilson Avenue to School Driveways	2,480	220	2,700
School Driveways to Murrieta Road	2,900	300	3,200
Wilson Avenue			
South of Mildred Street	2,480	220	2,700

Non-Motorized Transportation and Transit

The proposed project would generate a minor increase in demand for non-motorized travel as some students and employees may elect to travel to and from the school site as pedestrians or on bicycles. All of the streets in the school vicinity have sidewalks on at least one side of the street. There are yellow school crosswalks at the Mildred Street/Murrieta Road and Mildred Street/Hollowood Court intersections. These features facilitate pedestrian travel to and from the school and would not be noticeably impacted by the increase in students at the school associated with the project.

Bike lanes are provided on Murrieta Road. In addition, bike racks are provided on the school campus. These bike facilities would not be adversely impacted by the increased number of students at the school.

With regard to public transit, it is not anticipated that ridership on the bus routes cited previously would be noticeably affected by the school expansion project.

Findings Relative to CEQA Transportation Issues

The proposed project involves the construction of a new classroom building at Sky View Elementary School that will result in an additional 324 students at the school. For the transportation analysis, Appendix G of the CEQA Guidelines states that a proposed project could have a significant effect on the environment if the project would:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities,

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which addresses vehicle miles traveled (VMT),

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), or

d) Result in inadequate emergency access.

The findings regarding each of these issues are presented in the following sections.

Issue: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

CEQA Finding: No Impact

The Circulation Element of the City of Perris General Plan includes various goals, policies, and implementation measures that outline the overall objective of establishing a comprehensive multi-modal transportation system that is safe, achievable, efficient, environmentally and financially sound, accessible, and coordinated with the Land Use Element. The goals in the Circulation Element that are applicable to the proposed school project are as follows:

Goal I is to provide a comprehensive transportation system that will serve projected future travel demand, minimize congestion, achieve the shortest feasible travel times and distances, and address future growth and development in the City. Goal II is to provide a well planned, designed, constructed, and maintained street and highway system that facilitates the movement of vehicles and provides safe and convenient access to surrounding developments.

Goal IV is to provide safe and convenient pedestrian access and non-motorized facilities between residential neighborhoods, parks, open space, and schools that service those neighborhoods. Goal VII is to provide a transportation system that maintains a high level of environmental quality. Goal VIII is to achieve enhanced traffic flow, reduced travel delay, reduced reliance on single-occupant vehicles, and improved safety along the City and State roadway system. The goals that were not cited involve issues that are unrelated to the school project such as goods movement, aviation, and funding.

The proposed school classroom addition project is consistent with the goals presented in the Circulation Element and it would not adversely affect the performance of any roadway, transit, or non-motorized (pedestrian and bicycle) transportation facilities. Based on the traffic analysis, the discussion of non-motorized transportation and transit, and a review of the Circulation Element of the City's General Plan, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Issue: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which addresses vehicle miles traveled (VMT).

CEQA Finding: Less Than Significant Impact

Vehicle delays and levels of service (LOS) have historically been used as the basis for determining the significance of traffic impacts as standard practice in California Environmental Quality Act (CEQA) documents. On September 27, 2013, SB 743 was signed into law, starting a process that fundamentally changed transportation impact analyses as part of CEQA compliance. SB 743 eliminated auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts under CEQA. As part of the current CEQA Guidelines, the criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code Section 21099(b)(1)). Pursuant to SB 743, the California Natural Resources Agency adopted revisions to the CEQA Guidelines on December 28, 2018, to implement SB 743. CEQA Guidelines

Section 15064.3 describes how transportation impacts are to be analyzed after SB 743. Under the Guidelines, metrics related to "vehicle miles traveled" (VMT) were required beginning July 1, 2020, to evaluate the significance of transportation impacts under CEQA for development projects, land use plans, and transportation infrastructure projects. State courts ruled that under the Public Resources Code Section 21099, subdivision (b)(2), "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment" under CEQA, except for roadway capacity projects.

The City of Perris adopted a document titled "Transportation Impact Analysis Guidelines for CEQA," which includes screening criteria that can be used to identify when a proposed land use development project is anticipated to result in a less than significant VMT impact. The guidelines state that land use types that are considered local serving are exempt from a VMT analysis. Land uses in the local-serving category would have a less than significant transportation impact and can be screened from requiring a detailed VMT analysis. As schools are included as a local-serving land use, this school expansion project would have a less than significant VMT impact.

Issue: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

CEQA Finding: Less Than Significant Impact

The proposed project would not provide any on- or off-site access or circulation features that would create or increase any design hazards or incompatible uses. Access to the school site would continue to be provided by the existing driveways on the south side of Mildred Street and on the west side of Murrieta Road. There would be no roadway improvements in the public right-of-way and all improvements within the school site would be consistent with the criteria of the California Division of the State Architect.

The increased levels of traffic, the increased number of pedestrians, and the increased number of vehicular turning movements that would occur at the driveways and at the nearby intersections would result in an increased number of traffic conflicts and a corresponding increase in the probability of an accident occurring. These impacts would not be significant, however, because the streets, intersections, and driveways are designed to accommodate the anticipated levels of vehicular and pedestrian activity. These streets and intersections have historically been accommodating school-related traffic on a daily basis for the existing school. The proposed project would add more vehicles to the roadway network, but the additional vehicles would be compatible with the design and use of the affected streets. The proposed project would not result in any major safety or operational issues relative to access and circulation.

As the existing street network could readily accommodate the anticipated increase in vehicular, pedestrian, and bicycle activity, the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses.

Issue: Result in inadequate emergency access.

CEQA Finding: No Impact

The existing and proposed access and circulation features at the school, including the driveways, on-site roadways, parking lots, and fire lanes, would accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. These facilities would provide access to the school grounds, the buildings, and all other areas of the project site, including the playfields and hard courts. The design and any modifications to the access features are subject to and must satisfy the District's requirements and would be subject to approval by the Fire Department and the California Division of the State Architect. The proposed project would not, therefore, result in inadequate emergency access.

IV.
SUMMARY OF IMPACTS AND CONCLUSIONS

The key findings of the traffic/transportation impact analysis are presented below.

- The proposed classroom addition project at the school would generate a net increase of 243 vehicle trips during the morning peak hour (131 inbound and 112 outbound), 146 trips during the afternoon peak hour (67 inbound and 79 outbound), and 740 trips per day.
- The increase in traffic volumes generated by the school expansion would result in a minor increase in traffic volumes on Murrieta Road, Mildred Street, and Wilson Avenue.
- CEQA threshold of significance "a" asks if the proposed project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The analysis indicates that there would be **no impact** because:

  - The proposed project would not adversely affect the performance or safety of any roadway, transit, or non-motorized transportation facilities (pedestrians and bicycles) and would not conflict with any adopted plans, policies, or programs relative to these transportation modes.

  - The Circulation Element of the City of Perris General Plan includes various goals, policies, and implementation measures that outline the overall objective of establishing a comprehensive multi-modal transportation system that is safe, achievable, efficient, environmentally and financially sound, accessible, and coordinated with the Land Use Element. The proposed project is consistent with the goals presented in the Circulation Element and would not conflict with any goals, policies, or implementation measures of the General Plan.
- CEQA threshold of significance "b" asks if the proposed project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which addresses vehicle miles traveled (VMT). The analysis indicates that the VMT impact would be less than significant because the proposed project is a local-serving land use. The City of Perris guidelines state that projects in this category would have a **less than significant impact** on VMT and can be screened from any further VMT analysis.
- CEQA threshold of significance "c" asks if the proposed project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The analysis indicates that the streets, intersections, and driveways are designed to accommodate the anticipated levels of vehicular and pedestrian activity and that the streets have historically been accommodating the traffic generated by the existing school. The expanded school would be compatible with the neighborhood and would not result in any major hazards for vehicular traffic, pedestrians, or bicyclists. The proposed project would not, therefore, substantially increase hazards due to a geometric design feature or incompatible uses and the impacts would be **less than significant**.

- CEQA threshold of significance “d” asks if the proposed project would result in inadequate emergency access. The existing and proposed access and circulation features at the school, including the driveways, on-site roadways, parking lots, and fire lanes, would readily accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. Emergency vehicles would be able to access the school grounds, the buildings, and all other areas of the school, including the play fields, via on-site travel corridors. The proposed project would not result in inadequate emergency access and there would be **no impact**.

Appendix

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