Brew Harley Knox Warehouse Project

Air Quality Impact Report

May 5, 2023

CEQA Lead Agency:

City of Perris
Planning Department
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Project Applicant:

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List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	**Full Phrase or Description**
AB	Assembly Bill
ACC	Advanced Clean Cars
APN	Assessor Parcel Number
AQ	Air Quality
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
CAA	Clean Air Act
Cal-EPA	California Environmental Protection Agency
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CAFE	Corporate Average Fuel Economy
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
DPM	Diesel Particulate Matter
GHG	Greenhouse Gas(es)
GVWR	Gross Vehicle Weight Rating
H_2S	Hydrogen Sulfide
HAP	Hazardous Air Pollutants
HHDT	Heavy Heavy-Duty Truck
HVAC	Heating, Ventilation, and Air Conditioning
IPCC	Intergovernmental Panel on Climate Change
KBtu	Thousand British Thermal Units
LDA	Light Duty Auto
LDT	Light Duty Truck
LHDT	Light Heavy-Duty Truck
LST	Localized Significance Threshold
m^3	Cubic Meter
MATES V	Multiple Air Toxics Exposure Study in the South Coast Air Basin
MG	Milligrams
MHDT	Medium Heavy-Duty Truck
MPO	Metropolitan Planning Organization

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	**Full Phrase or Description**
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Transportation and Safety Administration
NO	Nitric Oxide
NOx	Oxides of Nitrogen
O_3	Ozone
PPB	Parts Per Billion
PPM	Parts Per Million
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
PM_{10}	Coarse Particulate Matter
PMI	Point of Maximum Impact
PRC	Public Resources Code
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SO_x	Sulfates
SRA	Source Receptor Area
TAC	Toxic Air Contaminants
U.S.	United States
U.S. EPA	United States Environmental Protection Agency
V.	Version
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds
VOL	Volume Source
µg	Micrograms
§	Section
° F	Degrees Fahrenheit

EXECUTIVE SUMMARY

This Air Quality Impact Report (Report) evaluates and documents the potential air quality and health risk impacts associated with the construction and operation of the proposed Brew Harley Knox Warehouse Project (proposed Project) located along Harley Knox Boulevard, between Perris Boulevard and Indian Avenue, in the northern part of the City of Perris, in Riverside County.

This Report is consistent with the guidance and recommendations contained in the South Coast Air Quality Management District's (SCAQMD) California Environmental Quality Act (CEQA) *Air Quality Handbook*, as amended and supplemented. This Report is intended to assist the CEQA Lead Agency (City of Perris) with its review of potential Project-related air quality and health risk impacts in compliance with the State CEQA Statutes and Guidelines, particularly in respect to the air quality issues identified in Appendix G of the State CEQA Guidelines.

S.1 PROPOSED PROJECT DESCRIPTION

Brew Enterprises II is proposing to construct a single, new, all-electric industrial warehouse building with an approximately 42,000 square foot solar panel system on its roof. The building would have approximately 58,974 square feet of warehousing use, which includes approximately 8,000 square feet of office space, on approximately 4.01 acres in the City of Perris. The proposed building would be located on a rectangularly shaped property along Harley Knox Boulevard, between Perris Boulevard and Indian Avenue, approximately 1.4 miles east of Interstate 215 (I-215) and 0.8 miles southeast of March Air Reserve Base.

The proposed warehouse building would feature six truck docks on its eastern façade. Truck access would be provided by a driveway on Harley Knox Boulevard, on the eastern side of the Project site. Onsite truck movements would occur along the eastern sides of the site near the truck dock doors. Parking spaces for commuter vehicles (e.g., cars and pick-up trucks) would be provided on the western and southern sides of the proposed warehouse.

The proposed Project would involve construction and operational activities that would generate emissions of regulated air pollutants from construction equipment, area sources, energy use and consumption, mobile sources including trucks, and off-road equipment. The proposed Project would also involve travel and idling by diesel-powered trucks, which would generate emissions of diesel particulate matter, or DPM, a pollutant identified by the California Air Resources Board as a toxic air contaminant (TAC). Construction activities are anticipated to last approximately 12 months and begin in early 2024. The building could operate 24-hours per day, 7 days per week.

S.2 POTENTIAL CONSTRUCTION AIR QUALITY IMPACTS

The proposed Project's construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version (V.) 2022.1. CalEEMod is a computer program recommended for use by the SCAQMD for use in preparing emission estimates for land use and development projects. The modeling indicates maximum daily emissions during unmitigated construction activities would be below all applicable SCAQMD regional and local thresholds for regulated air pollutants.

S.3 POTENTIAL OPERATIONAL AIR QUALITY IMPACTS

The proposed Project would result in the operation of a new warehousing building consisting of approximately 58,974 square feet. The proposed Project's potential operational emissions were estimated using CalEEMod and found to be below all applicable SCAQMD regional and localized thresholds for regulated air pollutants, such as ozone precursor pollutants (i.e., reactive organic gases and oxides of nitrogen) and particulate matter.

S.4 EXPOSE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS

The proposed Project would not expose sensitive receptors to substantially pollutant concentrations, including DPM. The Project is located approximately 1,150 feet from the nearest sensitive receptor and does not propose intensive construction or operational activities. The Project would utilize off-road equipment meeting U.S. EPA / CARB Tier 3 or Tier 4 standards (Tier 3 used only if Tier 4 is not available), and would only generate approximately 36 truck trips per day once operational. A quantitative health risk assessment is not required under CEQA to come to this conclusion, nor is it required by City Perris Good Neighbor Guidelines Goal 7 Policy 3, because the Project site is more than 1,000 feet from the nearest sensitive receptor (City of Perris, 2023).

S.5 ODORS

The proposed Project would involve construction and operational activities that could generate odors typical of many construction and light industrial land use operations. These types of odors (e.g., exhaust) are typical of the area and would be quick to disperse. The proposed Project would not result in the creation of objectionable odors that would affect a substantial number of people.

1 INTRODUCTION

Brew Enterprises II, (the Applicant) has applied to the City of Perris for a Specific Plan Amendment and Development Plan Review for its proposed Brew Harley Knox Warehouse Project (proposed Project). The proposed Project would be located south of Harley Knox Boulevard, in the northern part of the city, and include the development of a new industrial building consisting of approximately 58,974 gross square feet of building space with six (6) truck docks.

MIG, Inc. (MIG) has prepared this Air Quality Impact Report (Report) to evaluate the potential construction- and operations-related air quality and health risk impacts of the proposed Project. MIG has prepared this Report using Project-specific information contained in the Site Plan for the proposed Project, as well as the Transportation Study Screening Assessment prepared by Ganddini (Ganddini, 2023). Where necessary, MIG has supplemented available information with standardized sources of information, such as model assumptions pertaining to construction equipment activity levels. In general, this Report evaluates the potential "worst-case" conditions associated with the proposed Project's construction and operational emissions levels to ensure a conservative (i.e., likely to overestimate) assessment of potential air quality and health risk impacts is presented.

This Report is intended for use by the City to assess the potential air quality impacts of the proposed Project in compliance with the California Environmental Quality Act (CEQA; PRC §21000 et seq.) and the State CEQA Guidelines (14 CCR §15000 et seq.), particularly in respect to the air quality issues identified in Appendix G of the State CEQA Guidelines.

1.1 REPORT ORGANIZATION

This Report is organized as follows:

- **Chapter 1, Introduction,** explains the contents of this Report and its intended use.
- **Chapter 2, Proposed Project Description**, provides an overview of the construction and operational activities associated with the proposed Project.
- **Chapter 3, Environmental and Regulatory Setting,** provides pertinent background information on air quality, describes the existing air quality setting of the proposed Project, and provides information on the federal, state, and local regulations that govern the proposed Project's air quality setting and potential air quality impacts.
- **Chapter 4, Air Quality Impact and Health Risk Assessment,** discloses the methodology the potential construction and operational air quality impacts of the proposed Project and evaluates these effects in accordance with Appendix G of the State CEQA Guidelines.
- **Chapter 5, Report Preparers and References,** list the individuals involved, and the references used, in the preparation of this Report.

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2 PROPOSED PROJECT DESCRIPTION

Brew Enterprises II, (the Applicant) is proposing to develop the Brew Harley Knox Warehouse Project (proposed Project). The proposed Project would consist of constructing a new, all-electric industrial building with approximately 58,974 square feet of gross building space.[1]

2.1 PROJECT LOCATION

The proposed Project would be located along Harley Knox Boulevard, between Perris Boulevard and Indian Avenue, in the northern part of the City of Perris, in Riverside County. The Project site is an undeveloped, approximately 4.01-acre (gross), rectangularly-shaped area consisting of 1 parcel of land (Assessor's Parcel Number (APN) 302-090-021). The site is bounded by land that is currently vacant, but soon to be developed, to the east and west, Harley Knox Boulevard to the north, and a flood channel and industrial uses to the south (see Figure 2-1: Aerial View of the Project Site).

The Project site is, at closest, approximately 1.4 miles east of Interstate 215 (I-215) and 0.8 miles southeast of March Air Reserve Base.[2]

2.1.1 SITE LAND USE AND ZONING

The site is designated by the City's General Plan and zoned by the City's zoning codes as Commercial (City of Perris 2013). The Project site is within the Perris Valley Commerce Center area identified by the City's Perris Valley Commerce Center Specific Plan (City of Perris 2022a). The proposed Project includes a request to rezone the Project site to Light Industrial.

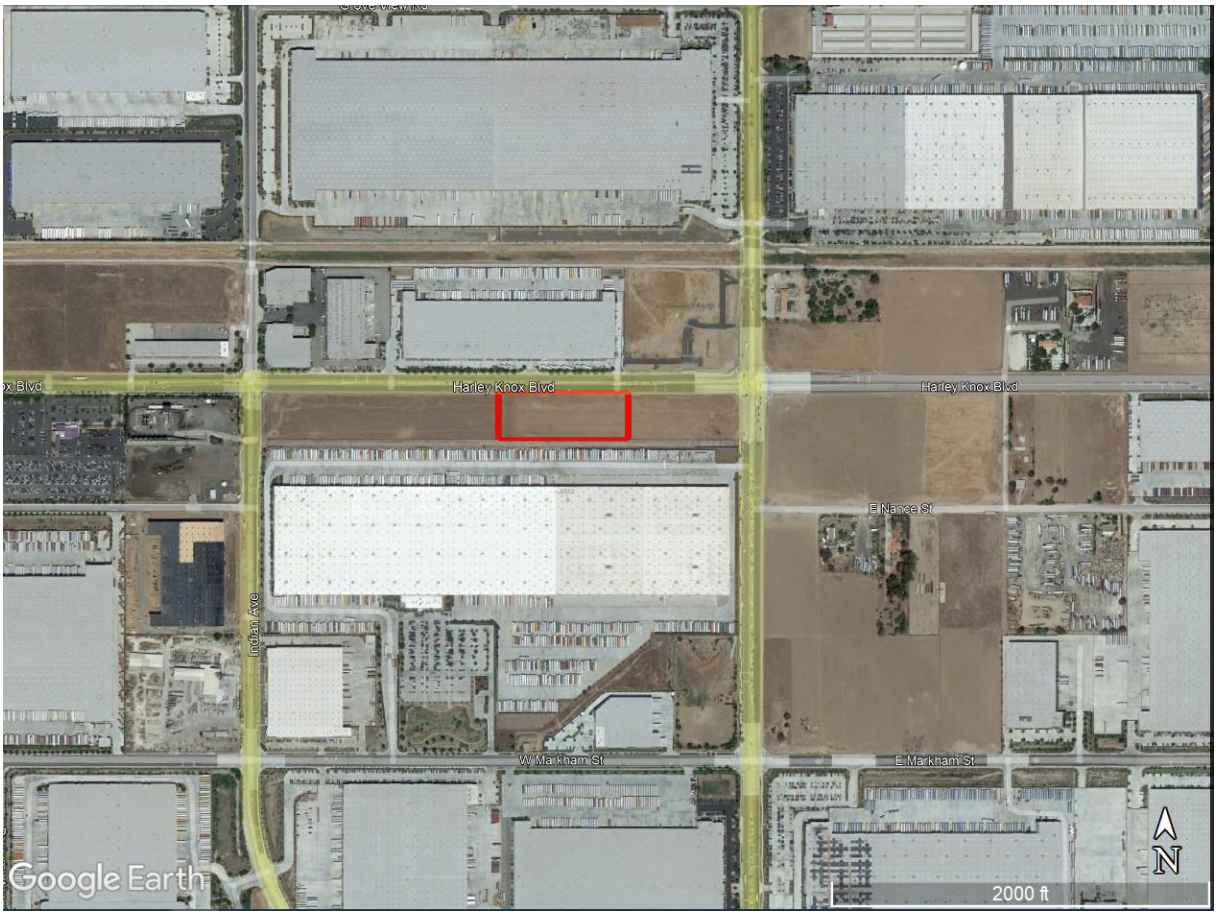
2.1.2 SURROUNDING LAND USES

The proposed Project site is surrounded by a vacant (but soon to be developed industrial land use) to the west, a flood channel and industrial uses to the south, a vacant (but soon to be developed commercial land use) to the east, and Harley Knox Boulevard and industrial and commercial land uses to the north. The nearest, existing single-family residential receptors are located approximately 1,150 feet east-southeast of the Project site on East Nance Street. Single-family residences are also present at distances further than this, such as those on Harley Knox Boulevard, approximately 2,000 feet east of the Project site, and those near the southwestern intersection of Markham Street and Brennan Avenue, approximately 0.9 miles east of the Project site in Moreno Valley.

[1] While the proposed Project consists of a 58,974 square foot warehouse, the emissions modeling was based on a 59,974 square foot warehouse. Modeling a larger warehouse provides a conservative estimate of emissions, because it accounts for slightly greater building space, and slightly more trips / mobile source emissions.

[2] Unless otherwise indicated, reported distances are measured between the edge of the listed feature (e.g., road or rail right-of-way, land use property boundary, etc.) and the Project's closest property line.

Figure 2-1: Aerial View of the Project Site



Source: MIG 2023

2.2 EXISTING SITE DESCRIPTION AND OPERATIONS

The Project site is currently undeveloped.

2.3 PROPOSED SITE DEVELOPMENT AND OPERATIONS

The proposed Project would involve the development of a new, approximately 58,974 square foot, all-electric industrial building, with an approximately 42,000 square foot solar panel system on its roof. Approximately 8,000 square feet of the building's total area would consist of office space. The entire approximately 4.01-acre site would be graded; the portions of the site not developed with the warehouse would either be hardscaped (e.g., parking or sidewalks) or landscaped. The proposed Project site plan is shown in Figure 2-2.

2.3.1 SITE LAYOUT AND BUILDING DESCRIPTION

The proposed rectangular building would reach a height of 45 feet above ground level on the northwestern, northeastern, and southwestern corners of the building, but would otherwise have a predominant building height of 43 feet above ground level. The long axis of the building, like the site, would be oriented west to east, with the front of the building on the northern perimeter. The building's office space would be located at the northwestern corner of the building. Employee parking areas would generally be located along the site's western and southern perimeter.

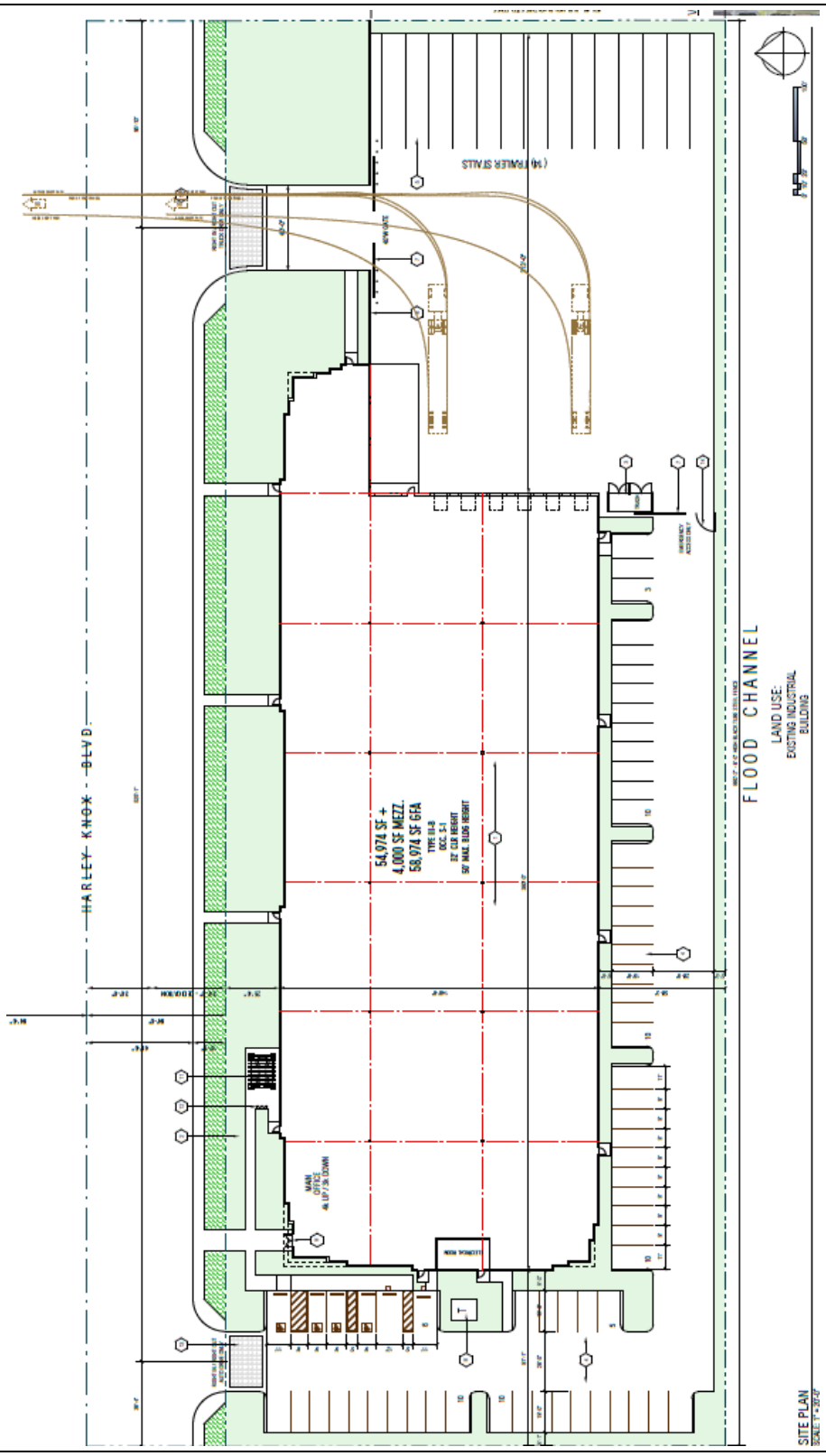
The building's eastern façade would include six truck docks that would be set back from the site's eastern property line approximately 218 feet. The building's facades would be set back approximately 58 feet from the site's southern property line, 81 feet from the western property line, and 25 feet from the northern property line. The site's property line would feature an 8-foot-tall steel tube fence.

2.3.2 SITE ACCESS AND PARKING

Access to the site would be provided via two driveways on Harley Knox Boulevard. The western driveway would provide access to the building's office area, as well as employee and visitor parking (approximately 67 stalls), which would be located along the western and southern portion of the site. The eastern driveway would provide access to the site's gate via a drive aisle along the eastern portion of the site. The building's six truck docks would be located on the eastern side of the building, secured by a gated access point on the drive-aisle. The site would include a trailer parking area with 14 trailer stalls on the eastern portion of the site. On-site circulation would be provided via 28-foot-wide drive aisles on the west and south sides of the building, and a 40-foot-wide drive aisle on the east side of the building. The western drive aisle would provide auto access via a right-turn in / right-turn out to the western and southern parking areas of the site.[3] The eastern drive aisle would provide right-turn in / right-turn out truck only access to the trailer parking and docks area of the site. A median in Harley Knox Boulevard would prevent trucks from turning left into either the site's eastern or western driveways from westbound Harley Knox Boulevard.

[3] Right-turn in / right-turn out in this context means that both inbound and outbound traffic from the site would travel eastbound on Harley Knox Boulevard.

Figure 2-2: Site Plan



Source: RGA, Office of Architectural Design, 2023

2.3.3 PROJECT OPERATIONS

The proposed Project is considered a speculative industrial building, because tenants/end users have not been identified. Although Project-specific details are not known, in general, industrial warehouse buildings generate emissions from sources such as on- and off-site vehicle trips, on-site truck maneuvering, loading, and unloading activities, on-site parking, and other on-site operations. With regards to potential Project operations that could generate emission, this Report assumes:

- **Hours of Operation:** The Project could operate up to 24 hours per day, 7 days per week. Employee shift changes would occur in the morning (approximately 7 to 8 AM), afternoon (approximately 3 PM to 4 PM), and nighttime (approximately 11 PM to 12 AM), with most employees working a daytime shift.
- **Vehicle Trip Generation:** The proposed Project's trip generation potential, as estimated in the Transportation Study Screening Assessment prepared for the Project, is summarized in **Table 2-1** (Ganddini Group, 2023). As shown in Table 2-1, the proposed Project would result in 103 total vehicle trips per day, including 67 passenger vehicle trips and 36 truck trips. The closest highway / freeway to the Project site is the I-215, which can be accessed via Harley Knox Boulevard on- and off-ramps located approximately 1.7 miles and 1.8 miles from the site. It was assumed 100% of the Project's truck traffic would travel to and from the site via Harley Knox Boulevard (Ganddini 2023). All trucks were assumed to enter and exit the site via the eastern driveway.
- **Yard Equipment:** The Project could include the use and operation of up to 7 electric-powered forklifts, pallet jacks, and other material handling equipment. This estimate is based on the average equipment usage at high cube warehouses, based on a survey conducted by the South Coast Air Quality Management District (SCAQMD, 2014). This equipment would primarily operate inside the proposed industrial warehouse building.

Table 2-1: Project Trip Generation Rates

Vehicle Type	AM Peak Hour	PM Peak Hour	Average Daily Trips	
			Number	Percent
Proposed Project				
Passenger Cars	9	9	67	65%
Truck Trips				
2-axle	0	0	6	6%
3-axle	0	0	7	7%
4-axle	1	1	23	22%
Subtotal(A)	1	1	36	35%
Total Project Trips	***10***	***10***	***103***	***100%***

Source: Ganddini, 2023, Table 1

(A) Totals may not equal due to rounding.

2.3.4 CITY OF PERRIS GOOD NEIGHBOR GUIDELINES

The proposed Project would include design features that reduce potential air pollutant emissions, and that are necessary to comply with the City of Perris Good Neighbor Guidelines for Siting New and/or Modified Industrial Facilities (City of Perris, 2022b). These design features are part of the proposed Project and are reflected in the emissions estimates and impact analyses contained in this Report; they are not mitigation measures. The City of Perris' Good Neighbor Guidelines, and a discussion of how the design feature would reduce emissions (including how it was addressed in the emissions modeling), are presented in Table 2-2.

Table 2-2: Summary of Applicable City of Perris Good Neighbor Guidelines

Design Consideration Topic	Guideline Goal Section	Emission Reduction Discussion
On-Site Parking and Truck Travel	Goal 1: Protect the neighborhood characteristics of the urban, rural, and suburban communities. • Policy 12: Warehouse/ distribution facilities shall be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on site queuing for trucks away from sensitive receptors. Commercial trucks shall not be parked in the public right of way or nearby residential areas, in accordance with the Perris Municipal Code and Specific Plans. • Policies 15, 17-19: Signs shall be installed that indicate off-site parking is prohibited, that provide contact information for the SCAQMD for complaints, that truck parking and maintenance should occur in designated areas, and that identify on-site circulation patterns. Goal 2, Policy 13: Post signs requiring to turn off truck engines when not in use.	Providing on-site parking and queuing would prevent vehicles from idling and parking on streets with residential buildings, reducing the potential for pollutant concentrations in these areas. Signage could prevent unnecessary truck travel and idling, which would avoid potential emissions.

Table 2-2: Summary of Applicable City of Perris Good Neighbor Guidelines		
Design Consideration Topic	**Guideline Goal Section**	**Emission Reduction Discussion**
Truck Routes	Goal 1, Policy 16: Signs shall be installed at all truck exit driveways directing truck drivers to the truck route as indicated in the City approved Truck Routing Plan and State Highway System to minimize potential impacts on sensitive receptors. Goal 3: Eliminate diesel trucks from unnecessary traversing through residential neighborhoods. • Policy 1: The facility operator shall abide by the truck routing plans, consistent with the City of Perris Truck Route Plan. • Policy 3: Truck traffic shall be routed to impact the least number of sensitive receptors.	Truck routes could avoid unnecessary truck travel, which would reduce emissions, and could reduce truck travel near sensitive receptors.
On-Site Equipment	Goal 2: Minimize exposure of diesel emissions to neighbors that are situated in close proximity to the warehouse/ distribution center. • Policy 1e). On site equipment, such as forklifts, shall be electric with the necessary electrical charging stations provided or be powered by alternative technology. • Policy 6. On site motorized operational equipment shall be ZE (Zero Emissions).	The Applicant will require the use of electric forklifts. Electric forklifts were incorporated into the CalEEMod file. The use of electric forklifts and other equipment avoids on-site emissions from diesel-, compressed natural gas- and other fossil-fuel-powered types of this equipment.
EV Parking	Goal 2, Policy 1g): At least 10% of all passenger vehicle parking spaces shall be electric vehicle (EV) ready. At least 5% of all passenger vehicle parking spaces shall be equipped with working Level 2 Quick charge EV charging stations installed and operational, prior to issuance of a certificate of occupancy. Signage shall be installed indicating EV charging stations and that spaces are reserved for clean air/EV vehicles.	EV ready parking promotes the use of EVs, avoiding potential emissions from gasoline-powered vehicles.

Table 2-2: Summary of Applicable City of Perris Good Neighbor Guidelines		
Design Consideration Topic	**Guideline Goal Section**	**Emission Reduction Discussion**
Odors	Goal 2, Policy 2: No operation shall be permitted which emits odorous gases or other odorous matter in such quantities as to be dangerous, injurious, noxious, or otherwise objectionable to a level that is detectable with or without the aid of instruments at or beyond the lot line of the property containing said operation or activity.	This requirement is intended to prevent odors from reaching receptors.
CALGreen Code	Goal 2, Policy 12: Require low energy use features, low water use features, all-electric vehicles (EV) parking spaces and charging facility, carpool/vanpool parking spaces, and short- and long-term bicycle parking facilities (Title 24 of the California Code of Regulations – CALGreen).	Complying with the energy provisions in the Title 24 Building Code would reduce emissions from energy consumption.
Buffers	Goal 4: Provide Buffers between Warehouses and Sensitive Receptors • Policy 1: A separation of at least 300 feet shall be provided, as measured from the dock doors to the nearest property line of the sensitive receptor. • Policy 2: A minimum 30-foot landscape setback shall be provided along property lines when adjacent to sensitive receptors. • Policy 3: Percentage of landscaping for projects in the General Industrial (GI) and Light Industrial Zones shall be increased from 10 and 14 to 15 percent. • Policy 4: Loading areas shall be screened with a 14-foot-high decorative block wall, architecturally consistent with the building, and an 8-foot high berming in front of the wall to soften the view of the wall from the public right of way. • Policy 6: Sites shall be densely screened with landscaping along all bordering streets and adjacent/across the street from sensitive receptors.	Increased buffers between Project emission sources and sensitive air quality receptors allows for more time and space for pollutants to disperse.

Table 2-2: Summary of Applicable City of Perris Good Neighbor Guidelines		
Design Consideration Topic	**Guideline Goal Section**	**Emission Reduction Discussion**
Construction Off-Road Equipment Selection	Goal 6: Implement Construction Practice Requirements in Accordance with State Requirements to Limit Emissions and Noise Impacts from Building Demolition, Renovation, and New Construction. • Policy 2: All diesel fueled off-road construction equipment greater than 50 horsepower shall be equipped with CARB Tier 4 Compliant engines. If Tier 4 equipment is not available within 50 miles of the project site, Tier 3 or cleaner off road construction equipment may be utilized. • Policy 11. Use of the most readily available technology (CARB Tier 3, Tier 4 Interim, and Tier 4 Compliant equipment).	The use of late-model off-road equipment meeting CARB and U.S. EPA Tier 3 and Tier 4 emissions standards (either through the original equipment manufacturer or the use of retrofit devices that reduce specific pollutant emissions) reduces construction emissions and potential pollutant concentrations at sensitive receptor locations. Tier 3 equipment was used in the CalEEMod file for construction emission modeling.

Table 2-2: Summary of Applicable City of Perris Good Neighbor Guidelines		
Design Consideration Topic	**Guideline Goal Section**	**Emission Reduction Discussion**
Construction Equipment Maintenance and Best Management Practices	Goal 6: Implement Construction Practice Requirements in Accordance with State Requirements to Limit Emissions and Noise Impacts from Building Demolition, Renovation, and New Construction. • Policy 3. Construction contractor shall utilize construction equipment with properly operating and maintained mufflers, consistent with manufacturer's standards. • Policy 4. Construction contractors shall locate or park all stationary construction equipment away from sensitive receptors nearest the project site, to the extent practicable. • Policy 5. The surrounding streets shall be swept on a regular basis to remove any construction related debris and dirt. • Policy 6. Appropriate dust control measures that meet the SCAQMD Rule 403 standards shall be implemented for grading and construction activity. • Policy 8. Prepare a construction traffic control plan prior to grading, detailing the locations of equipment staging areas material stockpiles, proposed road closures, and hours of construction operations to minimize impacts to sensitive receptors. • Policy 10. The maximum daily disturbance area (actively graded area) shall be determined by the Air Quality Study.	Policies 3 and 4 would reduce the emission concentrations experienced by sensitive receptors. Policies 4 and 5 would reduce particulate matter. Dust control measures such as watering the Project site are incorporated into the CalEEMod file. Policies 8 and 10 would minimize emissions during the grading phase.
Electric Charging during Construction	Goal 6. Policy 12. Designate an area of the construction site where electric-powered construction vehicles and equipment can charge if the utility provider can feasibly provide temporary power for this purpose.	The use of electric-powered equipment avoids on-site emissions from diesel-, compressed natural gas- and other fossil-fuel-powered types of this equipment. Connecting to electric service minimizes on-site emissions during construction.

Table 2-2: Summary of Applicable City of Perris Good Neighbor Guidelines		
Design Consideration Topic	**Guideline Goal Section**	**Emission Reduction Discussion**
Air Quality Analysis	Goal 7: Ensure Compliance with the California Environmental Quality Act (CEQA) and State Environmental Agencies. • Policy 1. In compliance with CEQA, conduct SCAQMD California Emissions Estimator Model (CalEEMod) and Emission Factors (EMFAC) computer models to identify the significance of air quality impacts on sensitive receptors. • Policy 2. Require an air quality analysis to ensure air quality protection, in accordance with the Air Quality Management District (AQMD) guidelines, for both project specific and cumulative impact analysis. • Policy 3. Require Health Risk Assessments for industrial uses within 1,000 feet of sensitive receptors in accordance with AQMD guidelines.	This Air Quality Impact Report addresses Policy 1 and 2. There are no sensitive receptors within 1,000 feet of the Project site.
Solar Ready Roofs	Goal 7, Policy 7: All building roofs shall be solar-ready	The installation of solar PV system will reduce facility energy demand and indirect emissions associated with energy production.
Low VOC paints	Goal 7, Policy 8: Require the use of low Volatile organic compounds (VOC) paints and coatings (SCAQMD Rule 1113).	Complying with the requirement would reduce potential VOC emissions. The VOC content of the paints are incorporated into the CalEEMod file.

2.4 PROJECT CONSTRUCTION

Construction of the proposed Project is anticipated to begin as early as the 1st quarter of 2024 and take approximately 12 months to complete. The development of the approximately 4.01-acre site and the construction of the approximately 58,974 square feet industrial warehouse building would require site preparation, grading, building construction, paving, and architectural coating phases/activities. Soil would be balanced on site. The proposed Project is anticipated to require varying types of equipment throughout the different construction phases including, but not limited to, skip loaders, backhoes, loaders, graders, cranes, and forklifts. Table 2-3 summarizes the proposed Project's construction phasing and the typical pieces of heavy-duty, off-road construction equipment that would be required during each phase.

Table 2-3: Construction Activity, Duration, and Typical Equipment

Construction Activity	Duration (Days)(A)	Typical Equipment Used(B)
Site Preparation	8	Tractor/Loader/Backhoe
Grading	8	Scraper, Tractor/Loader/Backhoe, Grader
Building Construction (Foundation)	15	Tractor/Loader/Backhoe
Building Construction (Vertical)(C)	180	Tractor/Loader/Backhoe, Forklift, Crane
Trenching	20	Excavator, Backhoe
Building Construction (MEP/Other)	30	Forklift
Paving	18	Paver, Paving Equipment, Roller
Architectural Coating	18	Air Compressor

Source: RMD 2023.

(A) Days refers to total active workdays in the construction phase, not calendar days.

(B) The typical equipment list does not reflect all equipment that would be used during the construction phase. Not all equipment would operate eight hours per day each workday.

(C) The Building Construction (Vertical) phrase overlaps with the Trenching Phase and with the Building Construction (MEP/Other) Phase.

3 ENVIRONMENTAL SETTING AND REGULATORY FRAMEWORK

This chapter provides information on the environmental and regulatory air quality setting of the proposed Project. Information on existing air quality conditions, federal and state ambient air quality standards, and pollutants of concern was obtained from the U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB), and South Coast Air Quality Management District (SCAQMD).

3.1 REGIONAL ENVIRONMENTAL SETTING

Air quality is a function of pollutant emissions and topographic and meteorological influences. The amount of pollutants emitted into the air and the physical features and atmospheric conditions of a geographic region interact to affect the movement and dispersion of pollutants and determine the quality of its air.

The U.S. EPA and CARB are the federal and state agencies charged with maintaining air quality in the nation and state, respectively. The U.S. EPA delegates much of its authority over air quality to CARB. CARB has geographically divided the state into 15 air basins for the purposes of managing air quality on a regional basis. An air basin is a CARB-designated management unit with similar meteorological and geographic conditions. The proposed Project is located in the County of Los Angeles, within the South Coast Air Basin (Basin). The Basin includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties.

3.1.1 REGULATED AIR POLLUTANTS

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six common air pollutants: ozone (O_3), particulate matter (PM), which consists of "inhalable coarse" PM (particles with an aerodynamic diameter between 2.5 and 10 microns in diameter, or PM_{10}) and "fine" PM (particles with an aerodynamic diameter smaller than 2.5 microns, or $PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. The U.S. EPA refers to these six common pollutants as "criteria" pollutants because the agency regulates the pollutants on the basis of human health and/or environmentally-based criteria. CARB has established California Ambient Air Quality Standards (CAAQS) for the six common air pollutants regulated by the federal Clean Air Act (the CAAQS are more stringent than the NAAQS) plus the following additional air pollutants: hydrogen sulfide (H_2S), sulfates (SO_X), vinyl chloride, and visibility reducing particles. A description of the regulated air pollutants associated with the proposed Project is provided below.

- **Ground-level Ozone**, or smog, is not emitted directly into the atmosphere. It is created from chemical reactions between oxides of nitrogen (NO_X) and volatile organic compounds (VOCs), also called reactive organic gases (ROG), in the presence of sunlight (U.S. EPA, 2022a). Thus, ozone formation is typically highest on hot sunny days in urban areas with NO_X and ROG pollution. Ozone irritates the nose, throat, and air pathways and can cause or aggravate shortness of breath, coughing, asthma attacks, and lung diseases such as emphysema and bronchitis.
    - **ROG** is a CARB term defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and includes several low-reactive organic compounds which have been exempted by the U.S. EPA (CARB, 2004).

  - **VOC** is a U.S. EPA term defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. The term exempts organic compounds of carbon which have been determined to have negligible photochemical reactivity such as methane, ethane, and methylene chloride (CARB, 2004).
- **Particulate Matter (PM)**, also known as particle pollution, is a mixture of extremely small solid and liquid particles made up of a variety of components such as organic chemicals, metals, and soil and dust particles (U.S. EPA, 2022b).
  - PM_{10}, also known as inhalable coarse, respirable, or suspended PM_{10}, consists of particles less than or equal to 10 micrometers in diameter (approximately 1/7th the thickness of a human hair). These particles can be inhaled deep into the lungs and possibly enter the blood stream, causing health effects that include, but are not limited to, increased respiratory symptoms (e.g., irritation, coughing), decreased lung capacity, aggravated asthma, irregular heartbeats, heart attacks, and premature death in people with heart or lung disease (U.S. EPA, 2022b).
  - $PM_{2.5}$, also known as fine PM, consists of particles less than or equal to 2.5 micrometers in diameter (approximately 1/30th the thickness of a human hair). These particles pose an increased risk because they can penetrate the deepest parts of the lung, leading to and exacerbating heart and lung health effects (U.S. EPA, 2022b).
- **Carbon Monoxide (CO)** is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicles are the single largest source of carbon monoxide in the Basin. At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can aggravate cardiovascular disease and cause headaches, dizziness, unconsciousness, and even death (U.S. EPA, 2022c).
- **Nitrogen Dioxide (NO_2)** is a by-product of combustion. NO_2 is not directly emitted but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to ozone formation. NO_2 also contributes to the formation of particulate matter. NO_2 can cause breathing difficulties at high concentrations (U.S. EPA, 2016d).
- **Sulfur Dioxide (SO_2)** is one of a group of highly reactive gases known as oxides of sulfur (SO_X). Fossil fuel combustion in power plants and industrial facilities are the largest emitters of SO_2. Short-term effects of SO_2 exposure can include adverse respiratory effects such as asthma symptoms. SO_2 and other SO_X can react to form PM (U.S. EPA, 2016e).
- **Sulfates (SO_4^{2-})** are the fully oxidized ionic form of sulfur. SO_4^{2-} are primarily produced from fuel combustion. Sulfur compounds in the fuel are oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Sulfate exposure can increase risks of respiratory disease (CARB, 2022).

In addition to criteria air pollutants, the U.S. EPA and CARB have classified certain pollutants as hazardous air pollutants (HAPs) or toxic air contaminants (TACs), respectively. These pollutants can cause severe health effects at very low concentrations, and many are suspected or confirmed carcinogens. The U.S. EPA has identified 187 HAPs, including such substances as arsenic and chlorine; CARB considers all U.S. EPA designated HAPs, as well as particulate emissions from diesel-fueled engines (DPM) and other substances, to be a TAC. Since CARB's list of TACs references and includes U.S. EPA's list of HAPs, this document uses the term TAC when referring to HAPs and TACs. A description of the TACs associated with the proposed Project and its vicinity is provided below.

- **Gasoline-Powered Mobile Sources.** According to the SCAQMD's *Multiple Air Toxics Exposure Study in the South Coast Air Basin* (SCAQMD, 2021a), or MATES V, gasoline-powered vehicles emit TACs, such as benzene, which can have adverse health risks. Gasoline-powered sources emit TACs in much smaller amounts than diesel-powered vehicles. The MATES V study identifies that diesel emissions account for approximately 50% of the total air toxics and cancer risk in the Basin, while Benzene, 1,3-Butadiene, and Carbonyls make up approximately 25% of the cancer risk.
- **Diesel Particulate Matter (DPM).** Diesel engines emit both gaseous and solid material; the solid material is known as DPM. Almost all DPM is less than 1 micrometer (μm) in diameter, and thus is a subset of $PM_{2.5}$. DPM is typically composed of carbon particles and numerous organic compounds. Diesel exhaust also contains gaseous pollutants, including VOCs and NO_x. The primary sources of diesel emissions are ships, trains, trucks, rail yards and heavily traveled roadways. These sources are often located near highly populated areas, resulting in greater DPM related health consequences in urban areas. The majority of DPM is small enough to be inhaled into the lungs and what particles are not exhaled can be deposited on the lung surface and in the deepest regions of the lungs where the lung is most susceptible to injury. In 1998, CARB identified DPM as a toxic air contaminant based on evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure (CARB 2016).

Common criteria air pollutants, such as ozone precursors, SO_2, and PM, are emitted by a large number of sources and have effects on a regional basis (i.e., throughout the Basin); other pollutants, such as HAPs, TACs, and fugitive dust, are generally not as prevalent and/or emitted by fewer and more specific sources. As such, these pollutants have much greater effects on local air quality conditions and local receptors.

3.1.2 REGIONAL AIR POLLUTANT EMISSIONS LEVELS

CARB's estimate of the amount of emissions generated within the Basin in 2017, the most recent year for which data is available, is summarized in Table 3-1.

3.1.3 SOUTH COAST AIR BASIN CLIMATE, TOPOGRAPHY, AND METEOROLOGY

The Los Angeles region and the broader Los Angeles Basin are defined by a semi-arid, Mediterranean climate with mild winters and warm summers. The San Gabriel, San Bernardino, and San Jacinto Mountains bound the Basin to the north and east trap ambient air and pollutants within the Los Angeles and Inland Empire valleys below. The climate of the greater Los Angeles region is classified as Mediterranean, but weather conditions within the Basin are dependent on local topography and proximity to the Pacific Ocean. The climate is dominated by the Pacific high-pressure system that results in generally mild, dry summers and mild, wet winters. This temperate climate is occasionally interrupted by extremely hot temperatures during the summer, Santa Ana winds during the fall, and storms from the Pacific northwest during the winter. In addition to the basin's topography and geographic location, El Niño and La Niña patterns also have large effects on weather and rainfall received between November and March.

Table 3-1: South Coast Air Basin Emissions Summary							
Emissions Source	**2017 Pollutant Emissions (Tons Per Day)**						
	ROG	**NO_X**	**$PM_{2.5}$**	**PM_{10}**	**PM**	**CO**	**SO_X**
Stationary(A)	87	42	13	18	26	85	8
Area-wide(B)	130	20	32	117	221	53	0
Mobile(C)	185	298	17	30	31	1,650	5
Total(D)	529	367	72	179	292	1,893	15
Emissions Source	**2017 Pollutant Emissions (Tons Per Year)**						
	ROG	**NO_X**	**$PM_{2.5}$**	**PM_{10}**	**PM**	**CO**	**SO_X**
Stationary(A)	31,675	15,217	4,595	6,526	9,432	30,901	2,982
Area-wide(B)	47,395	7,420	11,519	42,661	80,815	19,436	128
Mobile(C)	67,598	108,901	6,074	11,081	11,344	602,261	1,796
Total(D)	193,300	690,989	26,246	65,196	106,722	690,989	5,636

Source: CARB, 2022b, modified by MIG.

(A) Stationary sources include fuel combustion in stationary equipment, waste disposal, cleaning and surface coatings, petroleum production and marketing, or a specific type of facility such as printing and metals processing facilities.

(B) Mobile sources include automobiles, trucks, and other vehicles intended for "on-road" travel and other self-propelled machines such as aircraft, ocean going vessels, construction equipment, and all-terrain vehicles intended for "off-road" travel.

(C) Area-wide sources include solvent evaporation (e.g., consumer products, painting, and asphalt paving) and miscellaneous processes such as residential space heating, fugitive windblown dust, and cooking.

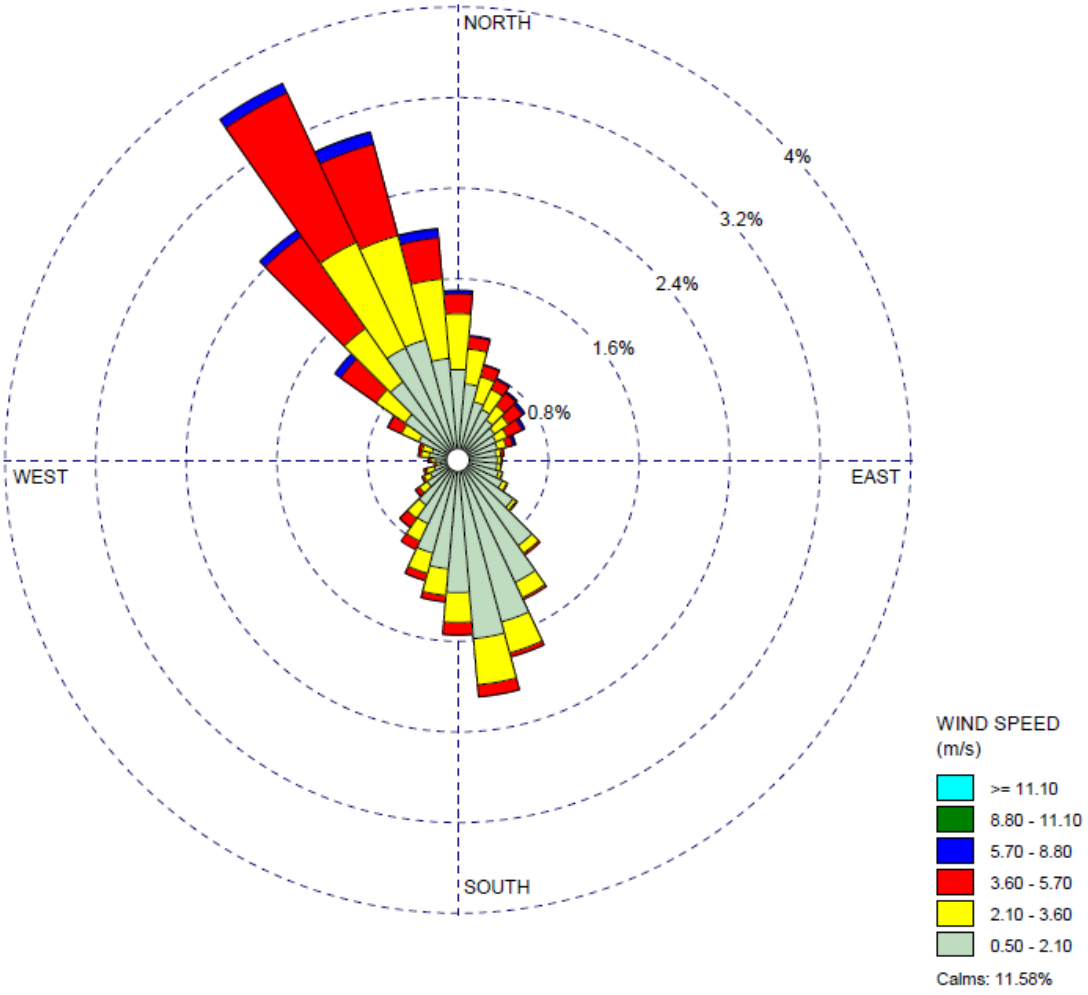
(D) Totals may not equal due to rounding.

The Pacific high-pressure system drives the prevailing winds in the Basin. The winds tend to blow onshore in the daytime and offshore at night. In the summer, an inversion layer is created over the coastal areas and increases ozone levels. A temperature inversion is created when a layer of cool air is overlain by a layer of warmer air; this can occur over coastal areas when cool, dense air that originates over the ocean is blown onto land and flows underneath the warmer, drier air that is present over land. In the winter, areas throughout the Basin often experience a shallow inversion layer that prevents the dispersion of surface level air pollutants, resulting in higher concentrations of criteria air pollutants such as CO and NO_X.

Temperatures near the Project site range from a high of 98 degrees Fahrenheit (F) in July and August to a low of 36 degrees Fahrenheit in December and January. Annual precipitation is approximately 12 inches, falling mostly from December through March (WRCC, 2016).

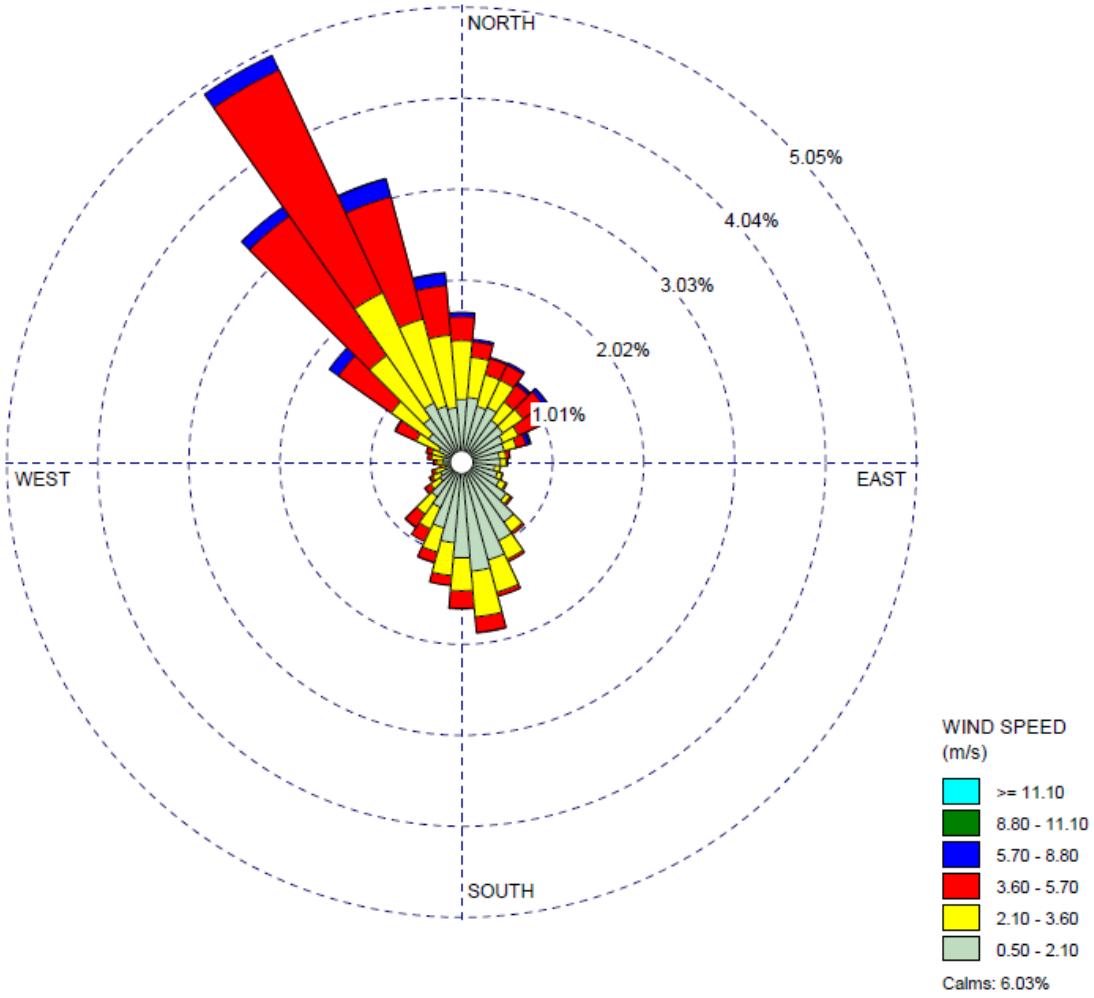
The SCAQMD maintains publicly meteorological data for use in air quality analyses. The closest meteorological station with data representative of those at the Project site is from the Perris Meteorological Station, approximately 4.7 miles south of the Project site. The wind rose for the Perris Meteorological Station is shown in Figure 3-1 and Figure 3-2. Figure 3-1 includes data from 24 hours a day, while Figure 3-2 includes only data from 7 a.m. to 7 p.m., the hours during which construction would occur. Figure 3-1 and Figure 3-2 indicate the prevailing wind near the Project site is from the northwest.

Figure 3-1: 24-Hour Wind Conditions at the Perris Meteorological Station (Blowing From)



Source: SCAQMD, 2018a

Figure 3-2: Daytime Wind Conditions at the Perris Meteorological Station (Blowing From)



Source: SCAQMD, 2018a

3.1.4 REGIONAL AIR QUALITY CONDITIONS AND ATTAINMENT STATUS

As described in Section 3.1.1 and shown in Table 3-2, the federal and state governments have established emission standards and limits for air pollutants which may reasonably be anticipated to endanger public health or welfare. These standards typically take one of two forms: standards or requirements that are applicable to specific types of facilities or equipment (e.g., petroleum refining, metal smelting), or concentration-based standards that are applicable to overall ambient air quality. Air quality conditions are best described and understood in the context of these standards; areas that meet, or attain, concentration-based ambient air quality standards are considered to have levels of pollutants in the ambient air that, based on the latest scientific knowledge, do not endanger public health or welfare.

The U.S. EPA, CARB, and the SCAQMD assess the air quality of an area by measuring and monitoring the amount of pollutants in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories:

- **Attainment.** A region is "in attainment" if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, an area that has been re-designated from nonattainment to attainment is classified as a "maintenance area" for 10 years to ensure that the air quality improvements are sustained.
- **Nonattainment.** If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and state laws require nonattainment areas to develop strategies, plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- **Unclassified.** An area is unclassified if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Table 3-2 summarizes the Basin's attainment status for criteria pollutants. The Basin is currently in nonattainment for state and federal ozone, state PM_{10}, and state and federal $PM_{2.5}$ standards.

Pollution problems in the Basin are caused by emissions within the area and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities to extensive operational sources including long-term operation of electrical power plants and other intense industrial use. Pollutants in the Basin are blown inward from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

3.2 LOCAL ENVIRONMENTAL SETTING

The proposed Project is located in the western portion of Riverside County, in the City of Perris, and is approximately 1.5 east of I-215. Residences are located northeast of the site the intersection of North Perris Boulevard and Harley Knox Boulevard and southeast of the site across North Perris Boulevard. The existing industrial / commercial uses, as well as vehicles on the local roadways all contribute to the local air quality conditions in proximity to the Project site.

Table 3-2: Summary of Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time[B]	California Standards[A]		National Standards[A]	
		Standard[C]	Attainment Status[D]	Standard[C]	Attainment Status[D]
Ozone	1-Hour (1979)	--	--	240 µg/m^3	Nonattainment
	1-Hour (Current)	180 µg/m^3	Nonattainment	--	--
	8-Hour (1997)	--	--	160 µg/m^3	Nonattainment
	8-Hour (2008)	--	--	147 µg/m^3	Nonattainment
	8-Hour (Current)	137 µg/m^3	Nonattainment	137 µg/m^3	Nonattainment
PM_{10}	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Attainment
	Annual Average	20 µg/m^3	Nonattainment	--	--
$PM_{2.5}$	24-Hour	--	--	35 µg/m^3	Nonattainment
	Annual Average (1997)	--	--	15 µg/m^3	Attainment
	Annual Average (Current)	12 µg/m^3	Nonattainment	12 µg/m^3	Nonattainment
Carbon Monoxide	1-Hour	23,000 µg/m^3	Attainment	40,000 µg/m^3	Attainment
	8-Hour	10,000 µg/m^3	Attainment	10,000 µg/m^3	Attainment
Nitrogen Dioxide	1-Hour	339 µg/m^3	Attainment	188 µg/m^3	Unclassifiable/ Attainment
	Annual Average	57 µg/m^3	Attainment	100 µg/m^3	Attainment
Sulfur Dioxide	1-Hour	655 µg/m^3	Attainment	196 µg/m^3	Attainment
	24-Hour	105 µg/m^3	--	367 µg/m^3	Unclassifiable/ Attainment
	Annual Average	--	--	79 µg/m^3	Unclassifiable/ Attainment
Lead	3-Months Rolling	--	--	0.15 µg/m^3	Nonattainment (Partial)
Hydrogen Sulfide	1-Hour	42 µg/m^3	Attainment	--	
Sulfates	24-Hour	25 µg/m^3	Attainment	--	
Vinyl Chloride	24-Hour	26 µg/m^3	Attainment	--	

Source: SCAQMD 2018b, modified by MIG.

(A) This table summarizes the CAAQS and NAAQS and the Basin's attainments status. This table does not prevent comprehensive information regarding the CAAQS and NAAQS. Each CAAQS and NAAQS has its own averaging time, standard unit of measurement, measurement method, and statistical test for determining if a specific standard has been exceeded. Standards are not presented for visibility reducing particles, which are not concentration-based. The Basin is unclassified for visibility reducing particles.

(B) Ambient air standards have changed over time. This table presents information on the standards previously used by the U.S. EPA for which the Basin does not meet attainment.

(C) All standards are shown in terms of micrograms per cubic meter (µg/m^3) rounded to the nearest whole number for comparison purposes (with the exception of lead, which has a standard less than 1 µg/m^3). The actual CAAQS and NAAQS standards specify units for each pollutant measurement.

(D) A= Attainment, N= Nonattainment, U=Unclassifiable.

3.2.1 LOCAL AIR QUALITY CONDITIONS

Air pollution levels are measured at monitoring stations located throughout the Basin. The Project site is located in SCAQMD Source Receptor Area (SRA) 24 – Perris Valley. The currently active station closest to the Project site is identified as Lake Elsinore by the SCAQMD. The Perris monitoring station, which monitored O_3 and PM_{10}, closed in 2021. The Lake Elsinore station is approximately 13.7 miles southwest of the Project site at 506 W Flint Street, Lake Elsinore, and monitors CO, O_3, NO_2, and PM_{10}. Metropolitan Riverside County 1, Rubidoux, located at 5888 Mission Boulevard, Riverside, approximately 14.5 miles northwest of the Project site, is the closest station that monitors $PM_{2.5}$. These monitoring stations represent the best approximation of the air quality conditions near the Project site.

Table 3-3 summarizes the published monitoring data from Lake Elsinore, along with $PM_{2.5}$ data from Metropolitan Riverside County 1, Rubidoux, from 2019 to 2021, the three most recent years for which verified, published data was available from the SCAQMD at the time this Report was prepared. Table 3-3 shows that air quality standards at this location have been exceeded for and O_3, PM_{10}, and $PM_{2.5}$. This indicates that PM_{10} and O_3 concentrations in the vicinity of the project site are elevated, consistent with the Basin's classification as non-attainment for these pollutants. As shown in Table 3-3:

- The maximum 1-hour and maximum 8-hour CO concentration decreased from 2019 to 2021. There were no days during which CO standards were exceeded during this time period.
- The maximum 1-hour NO_2 concentration and average annual NO_2 concentration generally increased from 2019 to 2021. There were no days during which NO_2 standards were exceeded during this time period.
- The maximum 1-hour O_3 concentration and maximum 8-hour concentration generally increased from 2019 to 2021, with the highest concentrations occurring in 2020. The number of days exceeding state and federal 8-hour standards increased from 2019 to 2021, with the highest number of exceedances occurring in 2020. The federal 1-hour standard was exceeded once in 2020 and number of days exceeding the state 1-hour standard increased from 2019 to 2021.
- The maximum 24-hour PM_{10} concentration generally decreased from 2019 to 2021, with the lowest concentration occurring in 2020. The average annual PM_{10} concentration generally increased from 2019 to 2021, with the highest concentration in 2020. The federal standard was not exceeded while the State PM_{10} annual standard was exceeded in 2018, 2019, and 2020. The number of exceedances increased from 2019 to 2020, but decreased in 2021 to a number of exceedances lower than in 2019.
- The maximum 24-hour $PM_{2.5}$ concentration decreased from 2019 to 2020 and increased substantially from 2020 to 2021. The average annual $PM_{2.5}$ concentration increased from 2019 2021. The federal 24-hour $PM_{2.5}$ concentration standard was exceeded in 2019, 2020, and 2021, with the highest number of exceedances occurring in 2021.

Table 3-3: 2019-2020 Local Air Quality Data for Lake Elsinore				
Pollutant	Ambient Air Standard	Year		
		2019	2020	2021
Ozone (O_3)				
Maximum 1-hour Concentration (ppm)		0.108	0.130	0.118
Maximum 8-hr Concentration (ppm)		0.089	0.100	0.097
Number of Days Exceeding State 1-hr Standard	>180 µg/m3	4	18	18
Number of Days Exceeding State 8-hr Standard	>137 µg/m3	28	52	46
Days Exceeding Federal 1-hr Standard	>0.124 ppm	0	1	0
Days Exceeding Federal 8-hr Standard	>0.070 ppm	28	52	44
Carbon Monoxide (CO)				
Maximum 1-hr Concentration (ppm)		1.6	0.9	0.9
Maximum 8-hr Concentration (ppm)		0.7	0.7	0.8
Days Exceeding State 1-hr Standard	>23,000 µg/m^3	0	0	0
Days Exceeding Federal/State 8-hr Standard	>10,000 µg/m^3	0	0	0
Days Exceeding Federal 1-hr Standard	>40,000 µg/m^3	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-hr Concentration (ppb)		38.0	43.6	43.7
Annual Arithmetic Mean Concentration (ppb)		6.8	7.4	7.0
Days Exceeding State 1-hr Standard	>180 µg/m^3	0	0	0
Suspended Particulate Matter (PM_{10})				
Maximum 24-hr Concentration (µg/m^3)		93	84	89
Annual Arithmetic Mean (µg/m^3)		18.7	22.0	21.4
Samples Exceeding State 24-hr Standard	>50 µg/m^3	5	7	4
Samples Exceeding Federal 24-hr Standard	>150 µg/m^3	0	0	0
Fine Particulate Matter ($PM_{2.5}$)[(A)]				
Maximum 24-hr Concentration (µg/m^3)		46.7	41.0	82.1
Annual Arithmetic Mean (µg/m^3)		11.1	12.6	12.6
Samples Exceeding Federal 24-hr Standard	>35 µg/m^3	4	4	10

Source: SCAQMD, 2021a, 2021b, 2021c

(A) Data from the Metropolitan Riverside County 1, Rubidoux monitoring station.

3.2.2 SENSITIVE AIR QUALITY RECEPTORS

Some people are more affected by air pollution than others. Sensitive air quality receptors include specific subsets of the general population that are susceptible to poor air quality and the potential adverse health effects associated with poor air quality. Both CARB and the SCAQMD consider residences, schools, parks and playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes to be sensitive air quality land uses and receptors (SCAQMD, 2017a; CARB, 2005).

The nearest, existing single-family residential receptors are located approximately 1,150 feet east-southeast of the Project site on East Nance Street. Single-family residences are also present at distances further than this, such as those on Harley Knox Boulevard, approximately 2,000 feet east of the project site, and those near the southwestern intersection of Markham Street and Brennan Avenue, approximately 0.9 miles east of the Project site in Moreno Valley.

3.2.3 EXISTING HEALTH RISKS AND DISADVANTAGED COMMUNITIES

The existing sensitive air quality receptors located in close proximity to the Project site are exposed to air pollution associated with motor vehicles operating on roadways (e.g., Harley Knox Boulevard, North Perris Boulevard, etc.), overhead aircraft, and warehouse facilities and industrial uses in proximity of the site. The following subsections identify existing sources of information that attempt to quantify community health risks based on the sources of pollution they are exposed to.

3.2.3.1 Existing and Planned Warehouses

The Project site is located within 0.25 miles of approximately five existing warehouse facilities over 50,000 square feet. There are approximately 16 additional warehouses over 50,000 square feet that are located within a mile of the Project site. In addition, there are two planned industrial projects within 0.25 miles of the Project site that are not yet operational. The existing and planned facilities within 0.25 miles of the Project site are shown in Table 3-4 and Table 3-5.[4]

Table 3-4: Existing Warehouse Facilities

Warehouse Location	Distance and Direction from Project site
400 Harley Knox Blvd	190 feet north
350 West Markham St	245 feet south
420 Harley Knox Blvd	685 feet northeast
17791 North Perris Blvd	1,075 feet north
17800 North Perris Blvd	1,310 feet northeast

Table 3-5: Planned Industrial Facilities

Facility Location	Facility Type	Distance and Direction from Project Site
Southeast corner of Harley Knox Boulevard and Indian Avenue	Warehouse	500 feet west
Northeast corner of Perris Boulevard and Markham Street	Truck Terminal	1,000 feet southeast

3.2.3.2 SCAQMD MATES V Carcinogenic Risk Map

According to the SCAQMD's MATES V Carcinogenic Risk Map, the existing carcinogenic risk in the vicinity of the Project is approximately 308 incremental cancer cases per million population (SCAQMD, 2021b).[5] This estimate reflects regional modeling efforts that largely do not account for site specific emission

[4] In addition, there are approximately 22 existing warehouses and approximately six (6) planned warehouses within one mile of the Project site.

[5] The potential cancer risk for a given substance is expressed as the incremental number of potential cancer cases that could be developed per million people, assuming that the population is exposed to the substance at a constant annual average concentration over a presumed 70-year lifetime. These risks are usually presented in chances per million. For example, if the cancer risks were estimated to be 100 per million, the probability of an individual developing cancer due to a lifetime of

rates and dispersion characteristics that typically result in refined and substantially lower health risk estimates.

3.2.3.3 CalEnviroScreen and Disadvantaged Communities (Senate Bill 535)

CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. While CalEnviroScreen was originally developed as part of Senate Bill (SB) 535 and used to identify disadvantaged communities for the purposes of allocating funding from the State's Cap-and-Trade regulation, its application and scope have expanded over the years. The tool uses environmental, health, and socioeconomic information to produce scores for every census tract in the state. The CalEnviroScreen model is made up of four components – two pollution burden components (exposures and environmental effects) and two population characteristics components (sensitive populations and socioeconomic factors). The four components are further divided into 21 indicators. An indicator is a measure of either environmental conditions, in the case of pollution burden indicators, or health and vulnerability factors, in the case of population characteristic indicators.

- **Exposure** indicators are based on the measurements of different types of pollution that people may come into contact with. Exposure indicators include:
  - Air Quality: Ozone
  - Air Quality: $PM_{2.5}$
  - Children's Lead Risk from Housing
  - Diesel Particulate Matter
  - Drinking Water Contaminants
  - Pesticide Use
  - Toxic Releases from Facilities
  - Traffic Density
- **Environmental effects** indicators are based on the locations of toxic chemicals in or near communities. Environmental effects indicators include:
  - Cleanup Sites
  - Groundwater Threats
  - Hazardous Waste Generators and Facilities
  - Impaired Water Bodies
  - Solid Waste Sites and Facilities
- **Sensitive population** indicators measure the number of people in a community who may be more severely affected by pollution because of their age or health. Sensitive population indicators include:
  - Asthma
  - Cardiovascular Disease
  - Low Birth Weight Infants
- **Socioeconomic factor** indicators are conditions that may increase people's stress or make healthy living difficult and cause them to be more sensitive to pollution's effects (OEHHA 2018). Socioeconomic factors include:
  - Educational Attainment

exposure would be one hundred in a million, or one in ten thousand. In other words, this predicts an additional 100 cases of cancer in a population of a million people over a 70-year lifetime (SCAQMD, 2021c).

- Housing Burden
- Linguistic Isolation
- Poverty
- Unemployment

Each census tract receives scores for as many of the 20 indicators as possible, and the scores are then mapped so that different communities can be compared. Percentiles are assigned to each census tract based on the census tract's score in relation to the rest of the state. An area with a high percentile is one that experiences a much higher pollution burden than areas with low scores. For example, if a census tract has an indicator in the 40th percentile, it means that indicator's percentile is higher than 40 percent of the census tracts in the state. CalEnviroScreen also provides a total (or cumulative) score, which is the product of multiplying the 13 pollution burden components by the 8 population characteristics. This total / cumulative score helps contextualize how multiple contaminants from multiple sources affect people, while taking into account their living conditions (e.g., nonchemical factors such as socioeconomic and health status). Communities that are within the top 25th percentile for total CalEnviroScreen scores are considered disadvantaged communities pursuant to SB 535 (OEHHA, 2021a and 2022).

According to the Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen 4.0 Map, the proposed Project is Census Tract 6065042620. This area shows an average pollution indicator percentile of 69% based on the CalEnviroScreen indicators (e.g., exposure, environmental effects, population characteristics, socioeconomic factors) and has a population 14,520 people (OEHHA, 2021b). The CalEnviroScreen data indicates approximately 57 in 10,000 people in the Project site's census tract visited an emergency facility for asthma-related health issues. This rate places the Project site's census tract in the 66th percentile, meaning the asthma rate in this census tract is higher than 66% of the census tracts in the State (OEHHA 2021). Table 3-6 summarizes the CalEnviroScreen indicators for census tract 6065042620.

As shown in Table 3-6, census tract 6065042620 is within the top third of total CalEnviroScreen percentiles throughout the State. It is in the 57th percentile for pollution burden and in the 70th percentile for population characteristics. While census tract 6065042620 has relatively low to moderate levels of exposure to several pollutants, it has high levels of ozone exposure. Census tract 6065042620 is in the 98th percentile for ozone, meaning this census tract has higher exposure to ozone than 98% of census tracts in the State. However, the total CalEnviroScreen Percentile is 69, which is not within the top 25% percentile. Since this census tract is not within the top 25% in scoring, according to the CalEnviroScreen methodology, it is considered a disadvantaged community pursuant to SB 535.

Table 3-6: CalEnviroScreen Health Risk Information

Indicator	**Census Tract Indicator Values**
	Tract 6037500403
Exposure Indicators	
Air Quality: Ozone	98
Air Quality: $PM_{2.5}$	53
Lead from Housing	22
Diesel Particulate Matter	48
Drinking Water Contamination	10
Pesticide Use	59

Table 3-6: CalEnviroScreen Health Risk Information	
Indicator	**Census Tract Indicator Values**
	Tract 6037500403
Toxic Releases from Facilities	38
Traffic Density	82
Environmental Effect Indicators	
Cleanup Sites	69
Groundwater Threats	0
Hazardous Waste Generators and Facilities	54
Impaired Water Bodies	0
Solid Waste Sites and Facilities	40
Sensitive Population Indicators	
Asthma	66
Cardiovascular Disease	91
Low Birth Weight Infants	63
Socioeconomic Factor Indicators	
Educational Attainment	75
Housing Burden	58
Linguistic Isolation	53
Poverty	65
Unemployment	16
Cumulative Percentiles	
Pollution Burden Percentile	57
Population Characteristics Percentile	70
CalEnviroScreen Percentile (Total)	**69**
SB 535 Disadvantaged Community?	**Yes**
Source: OEHHA, 2021b and 2022	

3.2.4 EXISTING SITE OPERATIONS AND EMISSIONS ESTIMATES

The proposed Project site is currently vacant. As a conservative approach, the analysis in this Report assumes no emissions are generated by the maintenance and upkeep of the existing land use / site.

3.3 FEDERAL, STATE, AND LOCAL AIR QUALITY REGULATIONS

3.3.1 FEDERAL AIR QUALITY REGULATIONS

3.3.1.1 Federal Air Quality Regulations

The Federal Clean Air Act (CAA) defines the U.S. EPA's responsibilities for protecting and improving the United States air quality and ozone layer. Key components of the CAA include reducing ambient concentrations of air pollutants that cause health and aesthetic problems, reducing emission of toxic air pollutants, and stopping production and use of chemicals that destroy the ozone.

Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, Carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop State Implementation Plans (SIPs); comprehensive documents that identify how an area will attain NAAQS. Deadlines for attainment were established in the 1990 amendments to the CAA based on the severity of an area's air pollution problem. Failure to meet air quality deadlines can result in sanctions against the State or the EPA taking over enforcement of the CAA in the affected area. SIPs are a compilation of new and previously submitted plans, programs, district rules, and State and Federal regulations. The SCAQMD implements the required provisions of an applicable SIP through its Air Quality Management Plan (AQMP). Currently, SCAQMD implements the 2012 Lead SIP for the Los Angeles County portion of Basin through the 2012 AQMP, and the 8-hr Ozone, 1-hr Ozone, 24-hr $PM_{2.5}$, and annual $PM_{2.5}$ SIPs through the 2016 AQMP. The 2022 AQMP addresses the 2015 8-hour Ozone NAAQS and will be submitted to the EPA as part of California's SIP.

3.3.1.2 Safe Affordable Fuel-Efficient Rule

On September 27, 2019, the U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) published the SAFE Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019)). The Part One Rule revoked California's authority to set its own greenhouse gas emissions standards and set zero emission vehicle mandates in California. As a result of the loss of the zero emission vehicles (ZEV) sales requirements in California, there may be fewer ZEVs sold and thus additional gasoline-fueled vehicles sold in future years (CARB 2019).

In April 2020, the U.S. EPA and NHTSA issued the SAFE Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (Final SAFE Rule) that relaxed federal greenhouse gas emissions and fuel economy standards. The Final SAFE Rule relaxed federal greenhouse gas emissions and Corporate Average Fuel Economy (CAFE) standards to increase in stringency at approximately 1.5 percent per year from model year (MY) 2020 levels over MYs 2021–2026. The previously established emission standards and related "augural" fuel economy standards would have achieved approximately 4 percent per year improvements through MY 2025. The Final SAFE Rule affects both upstream (production and delivery) and downstream (tailpipe exhaust) CO_2 emissions (CARB 2020) and has been challenged by 23 states. NHTSA repealed and the U.S. EPA rescinded the SAFE Rule Part One in December 2021 and March 2022, respectively, restoring California's authority to implement its GHG standards and ZEV mandates (NHTSA 2022, U.S. EPA 2022f).

3.3.2 STATE AIR QUALITY REGULATIONS

3.3.2.1 California Clean Air Act

The California CAA of 1988 was enacted to develop plans and strategies for attaining the CAAQS. CARB, which is part of the California Environmental Protection Agency (Cal-EPA), develops statewide air quality regulations, including industry-specific limits on criteria, toxic, and nuisance pollutants. The California CAA is more stringent than Federal law in a number of ways including revised standards for PM_{10} and ozone and state-specific standards for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

3.3.2.2 In-Use Off-Road Diesel Equipment Program

CARB's In-Use Off-Road Diesel Equipment regulation is intended to reduce emissions of NO_x and PM from off-road diesel vehicles, including construction equipment, operating within California. The regulation imposes limits on idling; requires reporting equipment and engine information and labeling all

vehicles reported; restricts adding older vehicles to fleets; and requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing exhaust retrofits for PM. The requirements and compliance dates of the off-road regulation vary by fleet size, and large fleets (fleets with more than 5,000 horsepower) must meet average targets or comply with Best Available Control Technology (BACT) requirements beginning in 2014. CARB has off-road anti-idling regulations affecting self-propelled diesel-fueled vehicles of 25 horsepower and up. The off-road anti-idling regulations limit idling on applicable equipment to no more than five minutes, unless exempted due to safety, operation, or maintenance requirements.

3.3.2.3 On-road Heavy-Duty Vehicles (In-Use) Regulation

CARB's In-Use Heavy-Duty Diesel-Fueled regulation (also known as the Truck and Bus Regulation) is intended to reduce emissions of NO_x, PM, and other criteria pollutants generated from existing on-road diesel vehicles operating in California. The regulation applies to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are privately or federally owned, and for privately and publicly owned school buses. Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Fleets complying with the heavier trucks and buses schedule must install the best available PM filter on 1996 model year and newer engines, and replace the vehicle 8 years later. Trucks with 1995 model year and older engines had to be replaced starting in 2015. Replacements with a 2010 model year or newer engine meet the final requirements, but owners can also replace the equipment with used trucks that have a future compliance date (as specified in regulation). Starting on January 1, 2023, all trucks and buses operating in California, with few exceptions, were required to have 2010 model year engines or newer.

3.3.2.4 Advanced Clean Fleets Regulation

On April 28, 2023, CARB adopted the proposed Advanced Clean Fleet Regulation (ACF Regulation). The ACF Regulation establishes a 100 percent ZEV sales requirement on medium- and heavy-duty truck manufacturers and would require certain fleet owners to transition to zero-emissions medium- and heavy-duty vehicles from 2024 to 2045. Affected fleets include drayage truck operators, State and local government, federal government, and high priority fleets.

3.3.2.5 California Building Industry Association vs. Bay Area Air Quality Management District

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." The opinion also holds that when a project has "potentially significant exacerbating effects on existing environmental hazards" those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on "existing conditions" rather than impacts of the environment on the project. The Supreme Court provided the example of a project that threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed. The Court concluded that it is proper under CEQA to undertake an analysis of the dispersal of existing contaminants because such an analysis would be focused on how the project "would worsen existing conditions." The court also found that the limited number of express CEQA provisions that require analysis of the impacts of the existing environment on a project – such as impacts associated with school siting and airports – should be viewed as specific statutory exceptions to the general rule that such impacts are not properly within CEQA's scope.

3.3.3 REGIONAL AIR QUALITY REGULATIONS

3.3.3.1 Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a Joint Powers Authority under California State Law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. SCAG encompasses the counties of Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial.

SCAG is designated as a Metropolitan Planning Organization (MPO) and as a Regional Transportation Planning Agency. Under SB 375, SCAG, as a designated MPO, is required to prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). On September 3, 2020, SCAG's Regional Council adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS). The 2020 RTP/SCS is a long-range visioning plan that focuses on land use and transportation strategies. Demographic and economic growth projections, travel activity data, strategies, and control measures contained in the 2020 RTP/SCS Information forms the basis for the transportation control strategy portion of the AQMP and are utilized in the preparation of air quality forecasts and consistency analysis included in the AQMP.

3.3.3.2 SCAQMD Air Quality Management Plan

The purpose of an AQMP is to bring an air basin into compliance with federal and state air quality standards and is a multi-tiered document that builds on previously adopted AQMPs. The 2016 AQMP for the Basin, which updated the 2012 AQMP, was approved by the SCAQMD Board of Directors on March 3, 2017. The 2016 AQMP provided new and revised demonstration's for how the SCAQMD, in coordination with Federal, State, Regional and Local Governments will bring the Basin back into attainment for the following NAAQS: 1997 8-hour Ozone; 1997 1-hour Ozone; 2008 8-hour Ozone; 2006 24-hour $PM_{2.5}$; and 2012 Annual $PM_{2.5}$.[6]

On December 2, 2022, the SCAQMD Governing Board adopted the 2022 AQMP, which focuses on bringing the South Coast Air Basin and the Salton Sea Air Basin into compliance with the 2015 8-hour ozone standard. The South Coast Air Basin, which is in extreme nonattainment, has an attainment year of 2037 for the 2015 8-hour ozone NAAQS. The 2022 AQMP includes growth projections developed by SCAG for the 2020 RTP/SCS that help inform emissions inventories. The 2022 AQMP plans to reduce NOx emissions to 60 tons per day, which is 67% below the current 2037 baseline, in order to meet this standard. The 2022 AQMP notes that widespread adoption of zero emission technologies across all sectors and a combination of local, state, and federal action will be required to achieve the projected NOx reductions.

The SCAQMD proposes incentive programs and 49 control measures that, with state and federal control measures, can achieve the required NOx reductions. SCAQMD's incentive programs would focus on promoting deployment of existing zero emission and low NOx technology and on developing new zero emission and ultra-low NOx technologies. SCAQMD's control measures consist of 30 measures that target stationary sources and 18 that target mobile sources. The 2022 AQMP includes stationary source

[6] Although the 2006 24-hour $PM_{2.5}$ standard was focused on in the 2012 AQMP, it has since been determined, primarily due to unexpected drought conditions, that it is impractical to meet the standard by the original attainment year. Since adoption of the 2012 AQMP, the U.S. EPA approved a re-classification to "serious" non-attainment for the standard, which requires a new attainment demonstration and deadline.

measures that seek to reduce NOx from residential combustion sources, commercial combustion sources, and large combustion sources, as further described below.

- Residential control measures focus on reducing NOx by replacing appliances and devices (e.g., for heating and cooking) with zero emission and low-NOx appliances.
- Commercial control measures are identified reduce NOx from commercial appliances, cooking devices, and small internal combustion engines and commercial combustion equipment.
- Large combustion control measures have been included reduce NOx from sources including boilers, engines, and facilities.

In addition, the 2022 AQMP includes stationary source measures to reduce VOC, including reducing leaks and providing incentive funding for the adoption of low-VOC technology. The 2022 AQMP also includes co-benefit measures that quantify the reduction in criteria air pollutants from energy and climate change measures. Other stationary source measures (e.g., education and outreach) seek to reduce all criteria pollutants.

Finally, the 2022 AQMP includes mobile source control measures grouped into the following categories:

- Emission growth management, which mitigate emissions from new or redevelopment projects.
- Facility based, which focus on mobile sources at port, railyards, and intermodal facilities.
- On-road and off-road mobile sources, which focus on vehicles and equipment used during construction and operation at industrial sites.
- Incentives, for early deployment of cleaner technology.
- Other measures (e.g., infrastructure planning).

3.3.3.3 SCAQMD Rule Book

In order to control air pollution in the Basin, the SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of businesses, processes, operations, and products to implement the AQMP and the various federal and state air quality requirements. SCAQMD does not adopt rules for mobile sources; those are established by CARB or the U.S. EPA. In general, the SCAQMD rules that are anticipated to be applicable to the development of the proposed Project, include:

- **Rule 401 (Visible Emissions)** prohibits discharge into the atmosphere from any single source of emission for any contaminant for a period or periods aggregating more than three minutes in any one hour that is as dark or darker in shade than that designated as No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
- **Rule 402 (Nuisance)** prohibits discharges of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 (Fugitive Dust)** prohibits emissions of fugitive dust from any active operation (e.g. demolition or grading), storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent capacity in the air). Rule 403 requires the implementation of Best Available Control Measures and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres.

- **Rule 481 (Spray Coating Operations)** imposes equipment and operational restrictions during construction for all spray painting and spray coating operations.
- **Rule 1108 (Cutback Asphalt)** prohibits the sale or use of any cutback asphalt containing more than 0.5 percent by volume organic compounds that evaporate at 260°C (500°F) or lower.
- **Rule 1113 (Architectural Coatings)** establishes maximum concentrations of VOCs in paints and other applications and establishes the thresholds for low-VOC coatings.
- **Rule 1143 (Consumer Paint Thinners and Multi-Purpose Solvents)** prohibits the supply, sale, manufacture, blend, package or repackage of any consumer paint thinner or multi-purpose solvent for use in the SCAQMD unless consumer paint thinners or other multi-purpose solvents comply with applicable VOC content limits.
- **Rule 2305 (Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program)** was adopted by the SCAQMD Governing Board on May 7, 2021, and sets forth requirements that regulated warehouse owners and operators must follow. Rule 2305 specifies that warehouse operators (for warehouses with an indoor floor space of 100,000 square feet or more and operate at least 50,000 square feet of that space for warehousing activities) must achieve a specified number of WAIRE Points (also referred to as the WAIRE Point Compliance Obligation, or WPCO) every year using either a menu of options, developing and implementing a custom plan, or paying a mitigation fee. Regardless of size, warehouse operators are required to submit a Warehouse Operations Notification (WON): 1) within 14 days of a new warehouse operator having access to at least 50,000 square feet of space for warehousing purposes, 2) within 30 days after a renovation that alters the size of the warehouse, or 3) within three days of a request from the SCAQMD. An Initial Site Information Report (ISIR) must also be submitted by an authorized official of the warehouse operator through the WAIRE Program Online Portal. No additional reporting is required in the ISIR if 1) the total square footage that may be used for warehousing activities in that facility is less than 100,000 square feet, or 2) the warehouse operator's lease does not allow them to use more than 50,000 square feet for warehousing activities.

3.3.4 CITY OF PERRIS

3.3.4.1 General Plan

The Conservation Element of the General Plan was adopted by the Perris City County in 2005 and amended to include the Sustainable Community Amendment in 2008. The General Plan Conservation Element contains the following goals and policies related to air quality (City of Perris 2008):

Goal VIII – Sustainable Future: Create a vision for energy and resource conservation and the use of green building design for the City, to protect the environment, improve quality of life, and promote sustainable practices..

- **Policy VIII.C** Adopt and maintain development regulations which encourage increased energy efficiency in buildings, and the design of durable buildings that are efficient and economical to own and operate. Encourage green building development by establishing density bonuses, expedited permitting, and possible tax deduction incentives to be made available for developers who meet LEED building standards for new and refurbished

developments (U.S. Green Building Council's Leadership in Energy and Environmental Design green building programs).
  - Implementation Measure VIII.C.3 Encourage the design and construction of durable buildings that are efficient and economical to own and operate.

Goal IX: Encourage project designs that support the use of alternative transportation facilities.

- **Policy IX.A** Encourage land uses and new development that support alternatives to the single occupant vehicle.
  - Implementation Measure IX.A.1: Encourage installation of shared vehicle parking and support facilities within new and refurbished commercial and industrial developments, i.e., dual fuel vehicles and charging systems on site, car pool parking, and bus stop shelters.
  - Implementation Measure IX.A.4 Encourage building and site designs that facilitate pedestrian activity, such as locating buildings close to the street and providing direct connections to public walkways and neighboring land uses.
  - Implementation Measure IX.A.5 The City shall require all new public and private development to include bike and walking paths wherever feasible.

Goal X: Encourage improved energy performance standards above and beyond the California Title 24 requirements.

- Policy X.B Encourage the use of trees within project design to lessen energy needs, reduce the urban heat island effect, and improve air quality throughout the region.
- Policy X.C Encourage strategic shape and placement of new structures within new commercial and industrial projects.
  - Implementation Measure X.C.1 Promote energy conservation by taking advantage of natural site features such as natural lighting and ventilation, sunlight, shade and topography during the site plan process.
  - Implementation Measure X.C.2 When possible, locate driveways and parking on the east and north sides of buildings to reduce heat buildup during hot afternoons.

In June 2015, the Perris City Council adopted the City of Perris Healthy Communities Element. The General Plan Healthy Communities Element contains the following goals and policies related to air quality:

Goal HC-6: Healthy Environment – Support efforts of local businesses and regional agencies to improve the health of our region's environment.

- Policy HC 6.1 Support regional efforts to improve air quality through energy efficient technology, use of alternative fuels, and land use and transportation planning.
- Policy HC 6.3. Promote measures that will be effective in reducing emissions during construction activities.
  - Perris will ensure that construction activities follow existing South Coast Air Quality Management District (SCAQMD) rules and regulations.
  - All construction equipment for public and private projects will also comply with California Air Resources Board's vehicle standards. For projects that may exceed daily construction emissions established by the SCAQMD, Best Available Control Measures will be incorporated to reduce construction emissions to below daily emission standards established by the SCAQMD.

- Project proponents will be required to prepare and implement a Construction Management Plan which will include Best Available Control Measures among others. Appropriate control measures will be determined on a project by project basis, and should be specific to the pollutant for which the daily threshold is exceeded.

In January 2022, the Perris City Council approved the City of Perris Environmental Justice Element. The General Plan Environmental Justice Element contains the following goals and policies related to air quality:

Goal 3.1: A community that reduces the negative impacts of land use changes, environmental hazards and climate change on disadvantaged communities.

- As part of the development review process, require conditions that promote Good Neighbor Policies for Industrial Development for industrial buildings larger than 100,000 square feet. The conditions shall be aimed at protecting nearby homes, churches, parks, day-care centers, schools, and nursing homes from air pollution, noise lighting, and traffic associated with large warehouses, making them a "good neighbor."

Goal 3.2: A community that actively works to reduce the impacts of poor air quality.

Goal 5.1: Neighborhoods designed to promote safe and accessible connectivity to neighborhood amenities for all residents.

- Require developers to provide pedestrian and bike friendly infrastructure in alignment with the vision set in the City's Active Transportation plan or active transportation in-lieu fee to fund active mobility projects.

3.3.4.2 Perris Valley Commerce Center Specific Plan

The Perris Valley Commerce Center Specific Plan was approved by the Perris City Council in January 2010, and was most recently updated in February 2022 with Amendment 12. The Specific Plan requires that industrial operations are screened from public view, oriented away from residential uses, and comply with required setbacks. Site design should consider pedestrian access.

3.3.4.3 Active Transportation Plan

In December 2020, the City of Perris adopted the City of Perris Active Transportation Plan, which aims to increase walking and biking in the city. The Active Transportation Plan contains the following goals, objectives, and actions related to air quality:

Goal: Safety & Health.

- Objective C: Reduce air pollution, asthma rates, and greenhouse gas emissions.
  - Action 2. Achieve a 5% reduction in vehicle miles traveled annually as residents, workers, and visitors meet daily needs by walking, bicycling, and using transit.

3.3.4.4 Municipal Code

The City of Perris Municipal Code, Title 7 (Health and Welfare), Chapter 7.34 (Noise Control), Section 7.34.060. (Construction Noise) finds the following unlawful:

- 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 Municipal Code, Title 7 (Health and Welfare), Chapter 7.40 (Transportation Demand Management), Section 7.40.030. (Policy) establishes the following for industrial development that is 150 acres, has 100 employees, or generates a minimum of 200 peak-hour vehicle trips:

- Any development project including commercial, industrial and mixed uses, may adversely impact existing transportation and parking facilities, resulting in deteriorating levels of traffic service, increased motor vehicle emissions, and possibly significant additional capital expenditures to augment and improve the existing transportation system. In order to more efficiently utilize the existing and planned transportation system and to reduce vehicle emissions, it is the policy of the city to:
  (1) Reduce the number of peak-period vehicle trips generated in the city;
  (2) Promote and encourage the uses of alternative transportation modes such as ridesharing, carpools, vanpools, and public transit, bicycles and walking, as well as those facilities that support such modes of transportation;
  (3) Promote and encourage the implementation of flexible working hours and parking management strategies;
  (4) Achieve related reductions in vehicle trips, traffic congestion, and public expenditure and achieve air quality improvements through utilization of existing local mechanisms and procedures for development project review and permit processing;
  (5) Promote coordinated interjurisdictional implementation of strategies to reduce transportation demand and increase transportation system capacity;
  (6) Achieve the most efficient use of local resources through coordinated regional and local TDM programs.

The City of Perris Municipal Code, Title 9 (Zoning), Chapter 19.44 (Industrial Zones), Section. 19.44.070. (Performance Standards) establishes the following:

- Odors, dust and airborne pollutants. Odors, dust and airborne pollution, shall be controlled so as not to impact surrounding land uses or the public right-of-way. Proposed uses may be required to submit a detailed assessment addressing and mitigating any potential effects (Section 19.44.070(c)).
- Screen walls. Screen storage areas, outdoor work areas, and mechanical equipment with walls that utilize the same building materials and architectural design of the buildings. Soften screen walls with earth berms and dense landscaping. The intent is to keep walls as low and unobtrusive as possible while performing their screening and security functions (Section 19.44.070(b)(8)).

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4 AIR QUALITY IMPACT ANALYSIS

This chapter evaluates the direct and indirect air quality impacts that could result from implementation of the proposed Project.

4.1 THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed Project could result in potentially significant impacts related to air quality if it would:

- Conflict with or obstruct implementation of the applicable SCAQMD 2022 AQMP;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the South Coast Air Basin is designated non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

4.1.1 REGIONAL AND TOXIC AIR CONTAMINANT SIGNIFICANCE THRESHOLDS

Consistent with the guidance contained in Appendix G of the State CEQA Guidelines, this Report relies upon SCAQMD-recommended methods and pollutant thresholds to evaluate whether the proposed Project's emissions would violate any air quality standard, contribute substantially to an existing or projected air quality violation, result in a cumulatively considerable net increase in nonattainment criteria air pollutants, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD's recommended thresholds of significance for criteria pollutants and incremental increases in health risk are shown in Table 4-1.

Table 4-1: SCAQMD-Recommended CEQA Thresholds

Pollutant	Maximum Daily Emissions (lbs/day)	
	Construction	Operation
NO_X	100	55
VOC/ROG	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	

Source: SCAQMD, 2019b

4.1.2 LOCALIZED SIGNIFICANCE THRESHOLDS

In addition to establishing thresholds of significance for emissions of criteria air pollutants on a regional level, the SCAQMD has also developed Localized Significance Thresholds (LSTs) that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standards, which would result in significant adverse localized air quality effects. The LST methodology takes into account a number of factors, including (1) existing ambient air quality in each SRA; (2) how many acres the project would disturb; and (3) how far project construction and operational activities would take place from the nearest sensitive receptor. Unlike the regional emission significance thresholds, LSTs have only been developed for NO_X, CO, PM_{10} and $PM_{2.5}$.

This Report evaluates the proposed Project's potential to expose sensitive receptors to substantial pollutant concentrations pursuant to the SCAQMD Final Localized Significance Thresholds Methodology. This methodology provides screening tables for one through five-acre project scenarios. The construction and operational LSTs for one-acre, two-acre, and five-acre sites in SRA 24 (Perris Valley), the SRA in which the project is located, are shown in Table 4-2.

Table 4-2: SCAQMD Localized Significance Thresholds for Source Receptor Area 24

Pollutant Monitored	Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary				
	82 Feet	164 Feet	328 Feet	656 Feet	1,640 Feet
ONE-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	118	148	212	335	652
Carbon Monoxide (CO)	602	887	1,746	4,359	17,640
Particulate Matter (PM_{10})	4	12	30	67	178
Particulate Matter ($PM_{2.5}$)	3	4	8	20	86
Pollutant Monitored	**Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary**				
	82 Feet	**164 Feet**	**328 Feet**	**656 Feet**	**1,640 Feet**
ONE-ACRE SITE					
Operational Thresholds					
Nitrogen Oxides (NO_x)	118	148	212	335	652
Carbon Monoxide (CO)	602	887	1,746	4,359	17,640
Particulate Matter (PM_{10})	1	3	8	17	43
Particulate Matter ($PM_{2.5}$)	1	1	2	5	21
TWO-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	170	200	264	379	684
Carbon Monoxide (CO)	883	1,262	2,232	5,136	18,947
Particulate Matter (PM_{10})	7	20	38	75	186
Particulate Matter ($PM_{2.5}$)	4	6	10	23	91
Operational Thresholds					
Nitrogen Oxides (NO_x)	170	200	264	379	684

Table 4-2: SCAQMD Localized Significance Thresholds for Source Receptor Area 24					
Pollutant Monitored	**Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary**				
	82 Feet	**164 Feet**	**328 Feet**	**656 Feet**	**1,640 Feet**
Carbon Monoxide (CO)	883	1,262	2,232	5,136	18,947
Particulate Matter (PM_{10})	2	5	10	18	45
Particulate Matter ($PM_{2.5}$)	1	2	3	6	22
FIVE-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	270	302	378	488	780
Carbon Monoxide (CO)	1,577	2,178	3,437	6,860	22,530
Particulate Matter (PM_{10})	13	40	59	96	207
Particulate Matter ($PM_{2.5}$)	8	10	16	31	105
Operational Thresholds					
Nitrogen Oxides (NO_x)	270	302	378	488	780
Carbon Monoxide (CO)	1,577	2,178	3,437	6,860	22,530
Particulate Matter (PM_{10})	4	10	14	23	50
Particulate Matter ($PM_{2.5}$)	2	3	4	8	26
Source: SCAQMD 2008, modified by MIG 2023 Note: The localized thresholds for NOx in this table account for the conversion of NO to NO_2. The emission thresholds are based on NO_2 levels, as this is the compound associated with adverse health effects.					

4.1.3 CARBON MONOXIDE "HOT SPOT" THRESHOLDS

Historically, to determine whether a project poses the potential for a CO hotspot, the quantitative CO screening procedures provided in the *Transportation Project-Level Carbon Monoxide Protocol* (the Protocol) were used (UCD ITS 1997). The Protocol determines whether a project may worsen air quality by increasing the percentage of vehicles in cold start modes by two percent or more; significantly increasing traffic volumes by five percent or more; or worsening traffic flow at signalized intersections (by increasing average delay at intersections operating at level of service (LOS) E or F or causing an intersection that would operate at LOS D or better without the project, to operate at LOS E or F). With new vehicles and improvements in fuels resulting in fewer emissions, the retirement of older polluting vehicles, and new controls and programs, CO concentrations have declined dramatically in California. As a result of emissions controls on new vehicles, the number of vehicles that can idle, and the length of time that vehicles can idle before emissions would trigger a CO impact, has increased. Therefore, the use of LOS as an indicator is no longer applicable for determining CO impacts.

The BAAQMD developed a screening-level analysis for CO hotspots in 2010, which finds that projects that are consistent with the applicable congestion management program, and that do not cause traffic volumes at affected intersections to increase to more than 44,000 vehicles per hour, would not result in a CO hotspot that could exceed State or Federal air quality standards (BAAQMD 2017 pg. 3-4). CO modeling was conducted for the SCAQMD's 2003 AQMP at four busy intersections during morning and evening peak hour periods as well. The busiest intersection studied in this analysis, Wilshire Boulevard and Veteran Avenue, had 8,062 vehicles per hour during morning peak hours, 7,719 vehicles per hour during evening peak hours, and approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour CO concentration for this intersection was 4.6 ppm, which is less than a fourth of the 1-hour CAAQS

CO standard (20 ppm) (SCAQMD 2003a). The BAAQMD screening threshold is generally consistent with the results of the CO modeling conducted for the SCAQMD's 2003 AQMP.

Therefore, for purposes of this Report, the Project would pose the potential for a CO hotspot if it would exceed the BAAQMD's screening traffic level for peak hour intersection traffic volumes (44,000 vehicles per hour) (thereby having the potential to result in CO concentrations that exceed 1-hour State [20 ppm], 1-hour Federal [35 ppm], and/or State and Federal 8-hour [9 ppm] ambient air quality standards for CO).

4.2 ANALYSIS METHODOLOGY

Construction and operational emissions associated with buildout of the Project were calculated using CalEEMod and emission factors derived from CARB databases. The following summarizes the specific sources, and methodologies employed to estimate emissions.

4.2.1 MASS-BASED CRITERIA AIR POLLUTANT EMISSIONS

4.2.1.1 Construction Emissions

Construction of the proposed Project would generate equipment exhaust and dust emissions from the use of heavy-duty off-road equipment during site preparation, grading, trenching building construction, paving, and architectural coating activities, as well as worker, vendor, and hauling vehicle trips. The proposed Project's potential construction emissions were modeled using CalEEMod, Version 2022.1.1.8. The Project's construction activities, duration, and typical equipment used during construction are shown in Table 2-3. The construction phases, duration, and the type and amount of equipment used during construction were primarily generated using CalEEMod default assumptions, and modified to reflect the following Project-specific characteristics:

- **Demolition**: The demolition phase was removed since the Project site is vacant.
- **Construction Phasing, Duration, and Equipment:** The construction phasing, duration, equipment, and number of worker trips per construction phase were updated based on information provided by the Project Applicant.
- **Construction Equipment Design Features:** As described in Table 2-2, the proposed Project would be required to comply with the City of Perris Good Neighbor Guidelines. Accordingly, the following modifications were made to the model:
    - All off-road construction equipment greater than 50 horsepower was assumed to meet Tier 3 exhaust emission standards.[7]
- **Trips and VMT:** The number of worker, vendor, and hauling trips was increased based on Project-specific information provided by the Applicant.
- **Rule 403 Fugitive Dust Abatement:** The model was updated to reflect compliance with the watering requirements of SCAQMD Rule 403 during construction activities.

[7] Modeling off-road emissions using U.S. EPA / CARB Tier 3 emissions standards is considered conservative, since Goal 6, Policies 2 and 11 require the use of U.S. EPA / CARB Tier 4 emission standards. Tier 3 off-road equipment may only be used in the city when Tier 4 equipment is not available within 50 miles of the site.

4.2.1.2 Operational Emissions

Once operational, the proposed Project would generate emission from the following sources:

- **Small "area" sources** including landscaping equipment and the use of consumer products such as paints, cleaners, and fertilizers that result in the evaporation of chemicals to the atmosphere during product use.
- **Mobile sources** including trips made to and from the site by new employees and truck trips.

Similar to construction emissions, criteria air pollutant emissions from operational activities were estimated in CalEEMod, Version 2022.1.1.8 based on default model assumptions, with the following modifications made to reflect Project-specific characteristics:

- **Mobile Sources:**
  - **Trip Generation Rates:** The default weekday and weekend trip generation rate for the proposed land use were updated to reflect the trip generation rate (i.e., 103 trips per day) provided in the Trip Generation Assessment prepared for the Project (Ganddini 2023; see Table 2-1).
  - **Trip Type and Distance:** Passenger vehicle trips (65.0% of all trips) used the CalEEMod average trip distance of 20.4 miles. Truck trips (35.0% of all trips) were assumed to have an average trip distance of 40.0 miles, consistent with SCAQMD recommendations.[8]
  - **Vehicle Mix:** The default vehicle mix was updated to match the trip types identified in the Project's Trip Generation Assessment:
    - **Passenger Vehicles** were assumed to be a blend of light duty auto (LDA), light duty truck (LDT), medium duty vehicles (MDV), and motorcycles (MCY). The percent of these vehicle types utilized for the proposed Project are based on CalEEMod defaults and averaged to reflect the number of passenger vehicle trips generated by the proposed Project (65.0% of all Project trips).
    - **Trucks** were assumed to be a blend of Light-Heavy Duty (LHD) trucks (2-axle), Medium-Heavy Duty (MHD) trucks (3-axle), and Heavy-Heavy Duty (HHD) Trucks. The specific percent assigned to each vehicle category is based on the breakdown provided in the Trip Generation Assessment (35.0% of all Project trips, see Table 2-1).
- **Off-Road Equipment:** Seven (7) electric forklifts were added to the model, consistent with the average number of forklift/pallet jacks per 1,000 square feet of warehouse space, as provided in the SCAQMD high-cube warehouse survey (SCAQMD 2014).
- **Energy Use:** Natural gas use was excluded from the Project, since the Project does not propose natural gas connections for building or appliance systems. The default natural gas consumption accounted for in CalEEMod was converted to electricity at a rate of 3.412 kBTU per kWh.

[8] The average trip length for heavy trucks is based on the SCAQMD documents for the implementation of the Facility Based Mobile Source Measures adopted in the 2016 AQMP. SCAQMD's "Preliminary Warehouse Emission Calculations" cites a 39.9-mile trip length for heavy-heavy trucks (SCAQMD, 2018c).

4.3 CONSISTENCY WITH THE APPLICABLE AIR QUALITY PLAN

As described in Section 3.1, the proposed Project is within the South Coast Air Basin, which is under the jurisdiction of the SCAQMD. Pursuant to the methodology provided in Chapter 12 of the SCAQMD *CEQA Air Quality Handbook*, consistency with the AQMP is affirmed if the Project:

1) Is consistent with the growth assumptions in the AQMP; and
2) Does not increase the frequency or severity of an air quality standards violation, or cause a new one.

Consistency Criterion 1 refers to the growth forecasts and associated assumptions included in the AQMP. Projects that are consistent with the AQMP growth assumptions would not interfere with attainment of air quality standards, because this growth is included in the projections used to formulate the AQMP. The proposed Project is estimated to create approximately 50 new jobs, which would be well within the SCAG 2020 RTP/SCS growth projections for the City of Perris.[9] The proposed Project is consistent with the General Plan and Zoning designations, which form the basis for growth assumption accounted for in the SCAG 2020 RTP/SCS (SCAG, 2020). Therefore, the proposed Project would not exceed the growth assumptions contained in the AQMP.

Consistency Criterion 2 refers to the CAAQS. In developing its CEQA significance thresholds, the SCAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD, 2003a; page D-3). As described below in Section 0, the proposed Project would not generate construction or operational emissions in excess of SCAQMD criteria air pollutant thresholds.

For the reasons described above, the proposed Project would not conflict with the SCAQMD 2022 AQMP.

4.4 CUMULATIVELY CONSIDERABLE INCREASE IN REGULATED NONATTAINMENT POLLUTANTS

The proposed Project would generate both short-term construction emissions and long-term operational emissions. The Project's potential emissions were estimated using CalEEMod, V. 2022.1.1.8. As described in more detail below, the proposed Project would not generate short-term or long-term emissions that exceed SCAQMD-recommended pollutant thresholds.

4.4.1 CONSTRUCTION EMISSIONS

The proposed Project's maximum daily unmitigated construction emissions are shown in Table 4-3. The construction emissions estimates incorporate the Tier 3 requirement (see Table 2-2) and incorporate measures to control and reduce fugitive dust as required by SCAQMD Rule 403 (see Section 3.3.3). Please refer to Appendix A for CalEEMod output files and detailed construction emissions assumptions.

As shown in Table 4-3, construction criteria air pollutants associated with the proposed Project would be below all SCAQMD regional thresholds. Thus, the proposed Project would not generate construction-related emissions that exceed SCAQMD CEQA thresholds.

[9] The SCAG 2020 RTP/SCS, which formulate the growth projections on which the 2022 AQMP are based, estimated that the City of Pico Rivera would increase employment by approximately 10,300 jobs between 2016 and 2045, a growth rate of approximately 355 new jobs per year during that time period (SCAG, 2020).

Table 4-3: Unmitigated Construction Emissions Estimates						
Season	**Maximum Daily Emissions (lbs/day)**					
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Summer 2024	1.0	18.4	57.9	<0.1	2.4(A)	1.0(B)
Winter 2024	32.9	15.4	49.1	0.1	2.4(C)	0.8(D)
SCAQMD CEQA Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: MIG, 2023 (see Appendix A) and SCAQMD 2019b.

(A) PM_{10} emissions estimates include both exhaust (0.6 lbs/day) and dust (1.9 lbs/day) emissions. Fugitive dust emissions include application of control measures as required by SCAQMD Rule 403, including watering exposed areas two times (2x) daily and cleaning paved roads. Totals may not equal due to rounding.

(B) $PM_{2.5}$ emissions estimates include both exhaust (0.5 lbs/day) and dust (0.5 lbs/day) emissions. Fugitive dust emissions include application of fugitive dust control measures as required by SCAQMD Rule 403, including watering exposed areas two times (2x) daily. Totals may not equal due to rounding.

(C) PM_{10} emissions estimates include both exhaust (0.6 lbs/day) and dust (1.8 lbs/day) emissions. Fugitive dust emissions include application of control measures as required by SCAQMD Rule 403, including watering exposed areas two times (2x) daily and cleaning paved roads. Totals may not equal due to rounding.

(D) $PM_{2.5}$ emissions estimates include both exhaust (0.6 lbs/day) and dust (0.3 lbs/day) emissions. Fugitive dust emissions include application of fugitive dust control measures as required by SCAQMD Rule 403, including watering exposed areas two times (2x) daily. Totals may not equal due to rounding.

4.4.2 OPERATIONAL EMISSIONS

The proposed Project's maximum daily unmitigated operational emissions, as estimated using CalEEMod V.2022.1.1.8 are shown in Table 4-4. The Project emissions presented are for the proposed Project's first year of operation, which is presumed to start in late 2024 / early 2025.

As shown in Table 4-4, the proposed Project's maximum daily unmitigated operational emissions would be below the SCAQMD's regional pollutant thresholds for all pollutants.

Table 4-4: Unmitigated Operational Emissions Estimates (Year 2024)						
Source	**Maximum Daily Pollutant Emissions (Pounds Per Day)(A)**					
	VOC	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Project Emissions						
Mobile	0.4	4.8	6.0	<0.1	1.1	0.3
Area	1.9	<0.1	2.6	<0.1	<0.1	<0.1
Total Project Emissions(B)	2.3	4.8	8.6	<0.1	1.1	0.3
SCAQMD CEQA Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: MIG, 2022 (See Appendix A) and SCAQMD, 2019b.

(A) Maximum daily ROG, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions occur during the summer. Maximum daily NO_X emissions occur during the winter. See Appendix A.

(B) Totals may not equal due to rounding.

4.4.3 CONCLUSION

In developing its CEQA significance thresholds, the SCAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD, 2003a; page D-3).

As described above the proposed Project's construction and operational emissions would be below applicable SCAQMD regional thresholds for criteria air pollutants. Therefore, the proposed Project would not result in a cumulatively considerable increase in criteria air pollutants.

4.5 SENSITIVE RECEPTORS AND SUBSTANTIAL POLLUTANT CONCENTRATIONS

The proposed Project would generate both short-term construction emissions and long-term operational emissions that could affect sensitive residential receptors located near the Project; however, as described in more detail below, the proposed Project would not generate short-term or long-term emissions that exceed SCAQMD-recommended localized significance thresholds or result in other substantial pollutant concentrations.

4.5.1 LOCALIZED SIGNIFICANCE THRESHOLDS ANALYSIS

4.5.1.1 Construction Emissions

The proposed Project's maximum daily construction emissions are compared against the SCAQMD's-recommended LSTs in Table 4-5. The LSTs are for SRA 24 (Perris Valley) in which the proposed Project is located. Construction emissions were estimated against the SCAQMD's thresholds for a 2-acre project size. A receptor distance of 656 feet (200 meters) was used to evaluate impacts at sensitive receptor locations for construction activities. The use of construction LSTs based on a 2-acre site is considered to be a conservative approach, since the Project would involve grading / site disturbance of approximately 4.01 acres, which is more than 2 acres. In addition, the distance of 656 feet is conservative, since the nearest sensitive receptor is approximately 1,150 feet from the Project site.

Table 4-5: Construction Emissions Localized Significance Thresholds Analysis

Construction Phase	Maximum On-Site Pollutant Emissions (lbs/day)(A)			
	NOx	CO	PM_{10}	$PM_{2.5}$
Site Preparation	6.0	8.1	0.2	0.2
Grading	15.3	19.4	2.2	0.7
Building Construction (Foundation)	3.9	5.3	0.2	0.1
Trenching	4.0	5.9	0.2	0.2
Building Construction (Vertical)	12.8	44.9	0.4	0.4
Building Construction (MEP/Other)	2.4	3.2	0.1	0.1
Paving	6.8	8.9	0.3	0.3
Architectural Coating	0.9	1.1	<0.1	<0.1
SCAQMD LST Threshold	335	4,359	67	20
Threshold Exceeded?	No	No	No	No

Source: MIG, 2023 (See Appendix A)
(A) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels.

As shown in Table 4-5, emissions from construction activities at the Project site will not exceed the SCAQMD's-recommended LSTs for SRA 24.

4.5.1.2 Operational Emissions

The proposed Project's maximum daily operational emissions are compared against the SCAQMD's-recommended LSTs in Table 4-6. The LSTs are for SRA 24 (Perris Valley) in which the proposed Project is located. The operational emissions from on-site area, mobile, and off-road emissions sources were estimated against the SCAQMD's thresholds for a 2-acre project size. A receptor distance of 656 feet (200 meters) was used to evaluate impacts at sensitive receptor locations for operational activities.

Table 4-6: Operational Emissions Localized Significance Thresholds Analysis

Operational Emission Source	Maximum On-Site Pollutant Emissions (lbs/day)(A)			
	NOx	CO	PM_{10}	$PM_{2.5}$
Mobile(B)	0.7	0.9	0.2	<0.1
Area	<0.1	2.6	<0.1	<0.1
Energy	0.0	0.0	0.0	0.0
Total On-Site Emissions	0.7	3.5	0.2	<0.1
SCAQMD LST Threshold	379	5,136	18	6
Threshold Exceeded?	No	No	No	No

Source: MIG, 2023 (See Appendix A)

(A) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels.

(B) Mobile source emissions are from Table 4-4. Total on-site mobile source emissions were presumed to be equal to 15% of total mobile emissions estimates.

As shown in Table 4-6, emissions from operational activities at the Project site will not exceed the SCAQMD's-recommended LSTs for SRA 24.

4.5.1.3 Carbon Monoxide Hot Spots

The proposed Project would result in approximately 103 new vehicle trips on the local roadway infrastructure per day (159 PCE trips), with 10 those trips occurring during the AM peak hour and 10 occurring in the PM peak hour, respectively (Ganddini 2023).[10] The Project is not located in an area where hourly or daily traffic volumes are anywhere close to 44,000 vehicles per hour, the BAAQMD screening threshold, or 100,000 vehicles per day. The proposed Project would not cause intersection volumes to exceed any daily (100,000) or hourly (44,000) screening vehicle volumes maintained by the SCAQMD and other regional air districts and, therefore, would not result in significant CO concentrations.

4.5.2 TOXIC AIR CONTAMINANT EMISSIONS

As described in Section 3.2.2, the nearest sensitive receptors are located southeast of the Project site. Project-related construction activities would emit DPM, in the form of PM_{10}, from equipment exhaust. The operation of trucks during operation of the proposed Project would also generate DPM from equipment exhaust during idling and truck and equipment operation.

[10] PCE trips reflect the impact of large trucks, buses, and recreational vehicles on traffic flow. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow down is much longer than for passenger cars, and varies depending on the type of vehicle and number of axles. A PCE factor of 2.0 applied to the 2-, 3-, and 4-axle trucks that were associated with the proposed Project (Ganddini 2023).

4.5.2.1 Individual Cancer Risk from Exposure to DPM

Exhaust emissions from construction and operation of the proposed Project would not expose sensitive receptors to substantial DPM concentrations, or associated adverse health risks, for the reasons described below.

First, the proposed Project consists of the development of an approximately 58,974 square foot warehouse building on approximately 4.01 acres. Compared to other warehouse projects in the vicinity and South Coast Air Basin as a whole, the proposed building is relatively small for its intended use, meaning that construction activities would be less intensive than those associated with a larger structure. Furthermore, the site is relatively flat, and soil would be balanced on site during the grading phase of the Project. Consistent with requirements of the City of Perris Good Neighbor Guidelines, Goal 6 Policies 2 and 11 (see Table 2-2), the proposed Project would be required to use the most readily available technology with regard to off-road construction emissions – ideally equipment meeting U.S. EPA / CARB Tier 4 Final emissions standards, but at least Tier 3 emission standards. The utilization of these pieces of equipment would help reduce exhaust emissions, including DPM, during construction activities.

The proposed Project would also not generate operational emissions that have a substantial adverse health impact on sensitive receptors associated with exposure to DPM. The proposed Project would only have six truck dock doors and generate approximately 36 truck trips per day. On-site equipment (e.g., forklifts) would be required to be electric and/or zero emissions, consistent with the City of Perris Good Neighbor Guidelines Goal 2 Policies 1e and 6.

In addition, the proposed Project is approximately 1,150 feet from the nearest sensitive receptor, located at 75 East Nance Lane. Pollutant emissions generated during construction and operational activities at the Project site would have ample time and space to disperse before reaching sensitive receptor locations. The CARB *Air Quality and Land Use Handbook* identifies that DPM concentrations from mobile sources are typically reduced by 70 percent at a distance of approximately 500 feet (CARB 2005). Thus, at distances more than double the 500 feet identified in the CARB *Air Quality and Land Use Handbook*, concentrations are anticipated to be reduced by even more than 70 percent. This, coupled with the U.S. EPA / CARB Tier 3 / Tier 4 equipment that would be used during construction would result in very, very low DPM concentrations and associated risks at receptor locations.

The proposed Project would not result in significant health risk impacts to sensitive receptors associated with DPM exposure. A quantitative health risk assessment using dispersion modeling is not required for the Project for the reasons outlined above. It should be further noted that the SCAQMD's *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions* recommends that, for quantitative health risk assessments, that peak annual DPM concentrations should be identified using a 100-meter (328 foot) receptor grid. On-site emissions (i.e., emissions from construction equipment, operational truck travel, and operational idling) would at its closest point occur 1,150 feet from the nearest residential receptor located. Off-site emissions from truck travel would occur approximately 425 feet from residential receptors at its nearest point,[11] which would occur as outbound trucks travel east on Harley Knox Boulevard (Ganddini 2023). Therefore, both onsite and offsite emissions would occur much further than the 100-meter recommended receptor grid. Finally, the Project, is not required to prepare a quantitative health risk assessment per the City Perris Good Neighbor Guidelines

[11] The closest sensitive receptor to the Project's offsite truck travel is a residence located at 220 East Nance Street. The residence is approximately 425 feet south of Harley Knox Boulevard, measuring from the edge of the road to the edge of the property line.

Goal 7 Policy 3, because the Project site is more than 1,000 feet from the nearest sensitive receptor (City of Perris, 2023).

4.5.2.2 Cumulative Cancer Risk from Exposure to DPM

The proposed Project is located in an industrial area that includes DPM emission sources, such as those associated with warehousing activities and truck trips. The construction and operational activities proposed by the Project would emit DPM emissions and contribute to overall DPM concentrations in the vicinity and SCAB as a while; however, these emissions would not be cumulatively considerable for several reasons. First, as discussed above in 4.5.2.1, the Project is a relatively small warehouse that would not emit substantial levels of DPM during construction or operation. The Project is also located approximately 1,150 feet from the nearest sensitive receptor, allowing emissions time and space to disperse. Secondly, as discussed in Section 3.2.3.3, the Project site is located in Census Tract 6065042620, which is not a disadvantaged community per SB 535, nor is it a census tract that experiences some of the worst, relatively DPM concentrations in the State. As shown in Table 3-6, the DPM percentile for Census Tract 6065042620 is approximately 48, meaning that this Census Tract has air quality that is better than approximately 52% of census tracts in the state. Therefore, although the proposed Project would emit DPM emissions, which would contribute to existing emissions and health risks in the area, it would not do so in a manner that is cumulatively considerable.

4.6 ODORS

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed Project would result in the construction of a new industrial use that could generate odors related to equipment use (e.g., oils, lubricants, fuel vapors); however, these activities would generally be located across the road from the nearest sensitive receptors, giving potentially odorous compounds time and space to disperse. The activities proposed as part of the Project would not generate sustained odors that would affect substantial numbers of people, nor nearby sensitive receptors.

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5 REPORT PREPARERS AND REFERENCES

This report was prepared by MIG under contract to San Gabriel Parkway Investment Company. This report reflects the independent, objective, professional opinion of MIG. The following individuals were involved in the preparation and review of this report:

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APPENDIX A: CalEEMod Output Files

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Brew Harley Knox Industrial Project Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Brew Harley Knox Industrial Project
Construction Start Date	1/1/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.856815, -117.229084
County	Riverside-South Coast
City	Perris
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5580
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.11

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

Unrefrigerated Warehouse-No Rail	52.0	1000sqft	1.19	51,974	0.00	0.00	—	—
General Office Building	4.00	1000sqft	0.09	8,000	0.00	0.00	—	—
Parking Lot	69.9	1000sqft	2.73	0.00	29,692	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.	1.17	1.01	18.4	57.9	0.04	0.60	1.91	2.44	0.55	0.47	0.96	—	6,656	6,656	0.21	0.40	11.8	6,791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.80	32.9	15.4	49.1	0.03	0.62	1.80	2.42	0.56	0.27	0.78	—	4,467	4,467	0.15	0.35	0.17	4,534
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.51	2.07	8.82	26.8	0.02	0.27	0.72	0.99	0.25	0.17	0.42	—	2,784	2,784	0.09	0.14	1.78	2,829
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.38	1.61	4.89	< 0.005	0.05	0.13	0.18	0.04	0.03	0.08	—	461	461	0.02	0.02	0.30	468
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshol	—	75.0	100	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshol d	—	75.0	100	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.17	1.01	18.4	57.9	0.04	0.60	1.91	2.44	0.55	0.47	0.96	—	6,656	6,656	0.21	0.40	11.8	6,791
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.80	32.9	15.4	49.1	0.03	0.62	1.80	2.42	0.56	0.27	0.78	—	4,467	4,467	0.15	0.35	0.17	4,534
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.51	2.07	8.82	26.8	0.02	0.27	0.72	0.99	0.25	0.17	0.42	—	2,784	2,784	0.09	0.14	1.78	2,829
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.09	0.38	1.61	4.89	< 0.005	0.05	0.13	0.18	0.04	0.03	0.08	—	461	461	0.02	0.02	0.30	468

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.	1.00	2.30	4.59	8.60	0.05	0.08	1.00	1.08	0.08	0.21	0.29	52.7	6,341	6,394	5.54	0.72	16.2	6,764
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.52	1.86	4.79	5.05	0.05	0.07	1.00	1.07	0.07	0.21	0.28	52.7	6,252	6,305	5.54	0.73	0.44	6,660
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.83	2.15	4.86	6.99	0.05	0.08	1.00	1.08	0.07	0.21	0.28	52.7	6,202	6,255	5.53	0.73	7.01	6,616
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.15	0.39	0.89	1.28	0.01	0.01	0.18	0.20	0.01	0.04	0.05	8.73	1,027	1,036	0.92	0.12	1.16	1,095
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	—	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	—	—	—	No	—	—	No	—	—	—	—	—	—	—

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	0.53	0.42	4.57	5.99	0.05	0.07	1.00	1.07	0.07	0.21	0.28	—	5,206	5,206	0.10	0.65	16.2	5,419
Area	0.46	1.88	0.02	2.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,039	1,039	0.10	0.01	—	1,045
Water	—	—	—	—	—	—	—	—	—	—	—	24.4	85.2	110	2.51	0.06	—	190
Waste	—	—	—	—	—	—	—	—	—	—	—	28.3	0.00	28.3	2.83	0.00	—	99.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Off-Road	0.00	0.00	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	1.00	2.30	4.59	8.60	0.05	0.08	1.00	1.08	0.08	0.21	0.29	52.7	6,341	6,394	5.54	0.72	16.2	6,764
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.52	0.40	4.79	5.05	0.05	0.07	1.00	1.07	0.07	0.21	0.28	—	5,128	5,128	0.10	0.65	0.42	5,325
Area	—	1.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,039	1,039	0.10	0.01	—	1,045
Water	—	—	—	—	—	—	—	—	—	—	—	24.4	85.2	110	2.51	0.06	—	190
Waste	—	—	—	—	—	—	—	—	—	—	—	28.3	0.00	28.3	2.83	0.00	—	99.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Off-Road	0.00	0.00	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	0.52	1.86	4.79	5.05	0.05	0.07	1.00	1.07	0.07	0.21	0.28	52.7	6,252	6,305	5.54	0.73	0.44	6,660
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.52	0.40	4.85	5.21	0.05	0.07	1.00	1.07	0.07	0.21	0.28	—	5,139	5,139	0.10	0.65	6.99	5,343
Area	0.32	1.75	0.02	1.79	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.35	7.35	< 0.005	< 0.005	—	7.37
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	971	971	0.09	0.01	—	976
Water	—	—	—	—	—	—	—	—	—	—	—	24.4	85.2	110	2.51	0.06	—	190
Waste	—	—	—	—	—	—	—	—	—	—	—	28.3	0.00	28.3	2.83	0.00	—	99.1

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Off-Road	0.00	0.00	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	0.83	2.15	4.86	6.99	0.05	0.08	1.00	1.08	0.07	0.21	0.28	52.7	6,202	6,255	5.53	0.73	7.01	6,616
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.09	0.07	0.88	0.95	0.01	0.01	0.18	0.20	0.01	0.04	0.05	—	851	851	0.02	0.11	1.16	885
Area	0.06	0.32	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	161	161	0.02	< 0.005	—	162
Water	—	—	—	—	—	—	—	—	—	—	—	4.04	14.1	18.1	0.42	0.01	—	31.5
Waste	—	—	—	—	—	—	—	—	—	—	—	4.69	0.00	4.69	0.47	0.00	—	16.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Off-Road	0.00	0.00	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	0.15	0.39	0.89	1.28	0.01	0.01	0.18	0.20	0.01	0.04	0.05	8.73	1,027	1,036	0.92	0.12	1.16	1,095

3. Construction Emissions Details

3.1. Site Preparation (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.20	6.01	8.11	0.01	0.24	—	0.24	0.22	—	0.22	—	1,162	1,162	0.05	0.01	—	1,166

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.13	0.18	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	25.5	25.5	< 0.005	< 0.005	—	25.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.22	4.22	< 0.005	< 0.005	—	4.23
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.06	0.63	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	0.01	< 0.005	0.01	134
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	0.08	0.03	2.48	0.58	0.01	0.04	0.54	0.58	0.04	0.15	0.19	—	2,102	2,102	0.04	0.34	0.12	2,204

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	—	2.94	2.94	< 0.005	< 0.005	0.01	2.98
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	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.1	46.1	< 0.005	0.01	0.04	48.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.49	0.49	< 0.005	< 0.005	< 0.005	0.49
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	—	7.63	7.63	< 0.005	< 0.005	0.01	8.00

3.3. Grading (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.57	15.3	19.4	0.03	0.62	—	0.62	0.56	—	0.56	—	3,333	3,333	0.14	0.03	—	3,345
Dust From Material Movement	—	—	—	—	—	—	1.59	1.59	—	0.17	0.17	—	—	—	—	—	—	—
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	0.01	0.01	0.34	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.1	73.1	< 0.005	< 0.005	—	73.3

Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 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	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.1	12.1	< 0.005	< 0.005	—	12.1
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.01	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	212	212	0.01	0.01	0.02	214
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.70	4.70	< 0.005	< 0.005	0.01	4.76
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	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.79
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. Building Construction (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.13	3.94	5.32	0.01	0.16	—	0.16	0.14	—	0.14	—	763	763	0.03	0.01	—	765
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	0.01	0.01	0.16	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.3	31.3	< 0.005	< 0.005	—	31.4
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	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.19	5.19	< 0.005	< 0.005	—	5.21
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.20	2.27	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	476	476	0.02	0.02	0.05	482
Vendor	0.05	0.03	1.29	0.39	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,087	1,087	0.02	0.16	0.08	1,137
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	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.8	19.8	< 0.005	< 0.005	0.04	20.1
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.7	44.7	< 0.005	0.01	0.05	46.7
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	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.28	3.28	< 0.005	< 0.005	0.01	3.33
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.40	7.40	< 0.005	< 0.005	0.01	7.74
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

3.7. Building Construction (2024) - 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	0.43	0.36	12.8	44.9	0.02	0.41	—	0.41	0.37	—	0.37	—	2,586	2,586	0.09	0.02	—	2,593
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	0.43	0.36	12.8	44.9	0.02	0.41	—	0.41	0.37	—	0.37	—	2,586	2,586	0.09	0.02	—	2,593
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	0.21	0.18	6.33	22.1	0.01	0.20	—	0.20	0.18	—	0.18	—	1,275	1,275	0.04	0.01	—	1,279
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	0.04	0.03	1.16	4.04	< 0.005	0.04	—	0.04	0.03	—	0.03	—	211	211	0.01	< 0.005	—	212
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	0.34	0.31	0.29	5.01	0.00	0.00	0.78	0.78	0.00	0.18	0.18	—	864	864	0.04	0.03	3.43	877
Vendor	0.05	0.03	1.23	0.38	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,087	1,087	0.02	0.16	3.06	1,139
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	0.32	0.29	0.34	3.79	0.00	0.00	0.78	0.78	0.00	0.18	0.18	—	794	794	0.04	0.03	0.09	804
Vendor	0.05	0.03	1.29	0.39	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,087	1,087	0.02	0.16	0.08	1,137
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	0.16	0.14	0.17	1.97	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	396	396	0.02	0.01	0.73	402
Vendor	0.02	0.02	0.64	0.19	< 0.005	0.01	0.15	0.15	0.01	0.04	0.05	—	536	536	0.01	0.08	0.65	561

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	0.03	0.03	0.03	0.36	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.6	65.6	< 0.005	< 0.005	0.12	66.6
Vendor	< 0.005	< 0.005	0.12	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	88.7	88.7	< 0.005	0.01	0.11	92.9
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 (2024) - 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	0.08	0.08	2.38	3.21	< 0.005	0.10	—	0.10	0.09	—	0.09	—	457	457	0.02	< 0.005	—	459
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	0.20	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.6	37.6	< 0.005	< 0.005	—	37.7
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	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.22	6.22	< 0.005	< 0.005	—	6.24
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	0.22	0.21	0.19	3.34	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	576	576	0.02	0.02	2.28	585
Vendor	0.05	0.03	1.23	0.38	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,087	1,087	0.02	0.16	3.06	1,139
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	0.02	0.02	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.0	44.0	< 0.005	< 0.005	0.08	44.7
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	89.3	89.3	< 0.005	0.01	0.11	93.5
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	—	7.29	7.29	< 0.005	< 0.005	0.01	7.39
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	0.02	15.5
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

3.11. Paving (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.45	0.40	6.85	8.90	0.01	0.29	—	0.29	0.26	—	0.26	—	1,351	1,351	0.05	0.01	—	1,355
Paving	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.02	0.02	0.34	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.6	66.6	< 0.005	< 0.005	—	66.8
Paving	—	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	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.1
Paving	—	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.26	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	265	265	0.01	0.01	0.03	268
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.4
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.19	2.19	< 0.005	< 0.005	< 0.005	2.22
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 (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.58	6.58	< 0.005	< 0.005	—	6.61
Architectural Coatings	—	1.61	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	1.09	1.09	< 0.005	< 0.005	—	1.09
Architectural Coatings	—	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.92	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	194	194	0.01	0.01	0.02	196
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
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	—	9.67	9.67	< 0.005	< 0.005	0.02	9.80
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.60	1.60	< 0.005	< 0.005	< 0.005	1.62
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

3.15. Trenching (2024) - 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	0.14	0.14	3.96	5.95	0.01	0.18	—	0.18	0.16	—	0.16	—	850	850	0.03	0.01	—	853
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	0.22	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.6	46.6	< 0.005	< 0.005	—	46.7
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	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.71	7.71	< 0.005	< 0.005	—	7.73
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	0.11	0.10	0.10	1.67	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.14	292
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	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.03	14.9
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	0.00	0.00	0.00	0.00	0.00	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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.43	2.43	< 0.005	< 0.005	< 0.005	2.46
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.17	0.10	4.33	1.14	0.04	0.07	0.63	0.70	0.07	0.15	0.21	—	4,180	4,180	0.07	0.63	12.1	4,381
General Office Building	0.36	0.32	0.24	4.85	0.01	< 0.005	0.36	0.37	< 0.005	0.06	0.07	—	1,026	1,026	0.03	0.02	4.06	1,038
Parking Lot	0.00	0.00	0.00	0.00	0.00	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	0.53	0.42	4.57	5.99	0.05	0.07	1.00	1.07	0.07	0.21	0.28	—	5,206	5,206	0.10	0.65	16.2	5,419

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.17	0.09	4.52	1.14	0.04	0.07	0.63	0.70	0.07	0.15	0.21	—	4,181	4,181	0.07	0.63	0.31	4,370
General Office Building	0.35	0.31	0.27	3.90	0.01	< 0.005	0.36	0.37	< 0.005	0.06	0.07	—	947	947	0.03	0.03	0.11	955
Parking Lot	0.00	0.00	0.00	0.00	0.00	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	0.52	0.40	4.79	5.05	0.05	0.07	1.00	1.07	0.07	0.21	0.28	—	5,128	5,128	0.10	0.65	0.42	5,325
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.02	0.83	0.21	0.01	0.01	0.12	0.13	0.01	0.03	0.04	—	692	692	0.01	0.10	0.87	724
General Office Building	0.06	0.06	0.05	0.74	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	—	159	159	0.01	< 0.005	0.29	160
Parking Lot	0.00	0.00	0.00	0.00	0.00	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	0.09	0.07	0.88	0.95	0.01	0.01	0.18	0.20	0.01	0.04	0.05	—	851	851	0.02	0.11	1.16	885

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	506	506	0.05	0.01	—	509
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	195	195	0.02	< 0.005	—	196
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	99.3	99.3	0.01	< 0.005	—	99.9
undefined	—	—	—	—	—	—	—	—	—	—	—	—	239	239	0.02	< 0.005	—	240
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,039	1,039	0.10	0.01	—	1,045
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	506	506	0.05	0.01	—	509
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	195	195	0.02	< 0.005	—	196
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	99.3	99.3	0.01	< 0.005	—	99.9
undefined	—	—	—	—	—	—	—	—	—	—	—	—	239	239	0.02	< 0.005	—	240
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,039	1,039	0.10	0.01	—	1,045
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No	—	—	—	—	—	—	—	—	—	—	—	—	83.8	83.8	0.01	< 0.005	—	84.3
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	32.3	32.3	< 0.005	< 0.005	—	32.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	16.4	16.4	< 0.005	< 0.005	—	16.5
undefined	—	—	—	—	—	—	—	—	—	—	—	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	161	161	0.02	< 0.005	—	162

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	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	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrige Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	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	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrige rated Warehou se-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. 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 er Products	—	1.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.46	0.43	0.02	2.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Total	0.46	1.88	0.02	2.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22
Total	0.06	0.32	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.22	1.22	< 0.005	< 0.005	—	1.22

4.4. Water Emissions by Land Use

4.4.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	23.0	78.1	101	2.37	0.06	—	177
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.36	4.62	5.98	0.14	< 0.005	—	10.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	2.39	2.39	< 0.005	< 0.005	—	2.40
Total	—	—	—	—	—	—	—	—	—	—	—	24.4	85.2	110	2.51	0.06	—	190
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	23.0	78.1	101	2.37	0.06	—	177
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.36	4.62	5.98	0.14	< 0.005	—	10.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	2.39	2.39	< 0.005	< 0.005	—	2.40
Total	—	—	—	—	—	—	—	—	—	—	—	24.4	85.2	110	2.51	0.06	—	190
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	3.81	12.9	16.8	0.39	0.01	—	29.4

General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.23	0.77	0.99	0.02	< 0.005	—	1.74
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.40	0.40	< 0.005	< 0.005	—	0.40
Total	—	—	—	—	—	—	—	—	—	—	—	4.04	14.1	18.1	0.42	0.01	—	31.5

4.5. Waste Emissions by Land Use

4.5.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	26.3	0.00	26.3	2.63	0.00	—	92.1
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	28.3	0.00	28.3	2.83	0.00	—	99.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	26.3	0.00	26.3	2.63	0.00	—	92.1

General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	28.3	0.00	28.3	2.83	0.00	—	99.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	4.36	0.00	4.36	0.44	0.00	—	15.3
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.33	0.00	0.33	0.03	0.00	—	1.16
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.69	0.00	4.69	0.47	0.00	—	16.4

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	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	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	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	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.8. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	1/1/2024	1/10/2024	5.00	8.00	—
Grading	Grading	1/11/2024	1/22/2024	5.00	8.00	—
Building Construction (Foundation)	Building Construction	2/5/2024	2/23/2024	5.00	15.0	—
Building Construction (Vertical)	Building Construction	2/24/2024	11/1/2024	5.00	180	—
Building Construction (MEP/Other)	Building Construction	7/22/2024	8/30/2024	5.00	30.0	—
Paving	Paving	11/2/2024	11/27/2024	5.00	18.0	—
Architectural Coating	Architectural Coating	11/28/2024	12/23/2024	5.00	18.0	—
Trenching	Trenching	6/3/2024	6/28/2024	5.00	20.0	—

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
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 3	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 3	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Tier 3	1.00	8.00	423	0.48
Building Construction (Foundation)	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	7.00	84.0	0.37
Building Construction (Vertical)	Cranes	Diesel	Tier 3	1.00	7.00	367	0.29
Building Construction (Vertical)	Forklifts	CNG	Average	3.00	8.00	70.0	0.30
Building Construction (Vertical)	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	7.00	84.0	0.37
Building Construction (Vertical)	Welders	Diesel	Tier 3	1.00	8.00	46.0	0.45
Building Construction (MEP/Other)	Forklifts	Diesel	Tier 3	3.00	8.00	82.0	0.20
Paving	Cement and Mortar Mixers	Diesel	Tier 3	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Tier 3	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 3	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Tier 3	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Trenching	Excavators	Diesel	Tier 3	1.00	8.00	158	0.38

Trenching	Tractors/Loaders/Backh	Diesel	Tier 3	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	30.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	16.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction (Foundation)	—	—	—	—
Building Construction (Foundation)	Worker	36.0	18.5	LDA,LDT1,LDT2
Building Construction (Foundation)	Vendor	35.0	10.2	HHDT,MHDT
Building Construction (Foundation)	Hauling	0.00	20.0	HHDT
Building Construction (Foundation)	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	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	14.6	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
Building Construction (Vertical)	—	—	—	—
Building Construction (Vertical)	Worker	60.0	18.5	LDA,LDT1,LDT2
Building Construction (Vertical)	Vendor	35.0	10.2	HHDT,MHDT
Building Construction (Vertical)	Hauling	0.00	20.0	HHDT
Building Construction (Vertical)	Onsite truck	—	—	HHDT
Building Construction (MEP/Other)	—	—	—	—
Building Construction (MEP/Other)	Worker	40.0	18.5	LDA,LDT1,LDT2
Building Construction (MEP/Other)	Vendor	35.0	10.2	HHDT,MHDT
Building Construction (MEP/Other)	Hauling	0.00	20.0	HHDT
Building Construction (MEP/Other)	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	20.0	18.5	LDA,LDT1,LDT2
Trenching	Vendor	—	10.2	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

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	89,961	29,987	7,122

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	0.00	0.00	—
Grading	0.00	0.00	12.0	0.00	—
Paving	0.00	0.00	0.00	0.00	2.73

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
General Office Building	0.00	0%
Parking Lot	2.73	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	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
Unrefrigerated Warehouse-No Rail	36.0	36.0	36.0	13,140	1,440	1,440	1,440	525,600
General Office Building	67.0	67.0	67.0	24,455	1,367	1,367	1,367	499,007
Parking Lot	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

5.10.2. 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	89,961	29,987	7,122

5.10.3. Landscape Equipment

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)
Unrefrigerated Warehouse-No Rail	530,028	349	0.0330	0.0040	0.00
General Office Building	204,227	349	0.0330	0.0040	0.00
Parking Lot	103,983	349	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)
Unrefrigerated Warehouse-No Rail	12,018,988	0.00
General Office Building	710,935	0.00
Parking Lot	0.00	470,788

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	48.9	—
General Office Building	3.72	—
Parking Lot	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
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

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
Forklifts	Electric	Average	7.00	8.00	82.0	0.20

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. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	29.1	annual days of extreme heat
Extreme Precipitation	1.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	6.36	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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

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	97.6
AQ-PM	53.3
AQ-DPM	47.8
Drinking Water	10.2
Lead Risk Housing	22.0
Pesticides	58.8
Toxic Releases	37.7
Traffic	81.9
Effect Indicators	—
CleanUp Sites	69.4
Groundwater	0.00
Haz Waste Facilities/Generators	53.5
Impaired Water Bodies	0.00
Solid Waste	40.1

Sensitive Population	—
Asthma	65.6
Cardio-vascular	90.6
Low Birth Weights	62.9
Socioeconomic Factor Indicators	—
Education	74.7
Housing	57.9
Linguistic	53.4
Poverty	64.5
Unemployment	15.8

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	36.04516874
Employed	38.00846914
Median HI	53.00911074
Education	—
Bachelor's or higher	28.6154241
High school enrollment	100
Preschool enrollment	5.440780187
Transportation	—
Auto Access	94.58488387
Active commuting	6.723983062
Social	—
2-parent households	87.71974849

Voting	9.636853587
Neighborhood	—
Alcohol availability	84.04978827
Park access	11.88245862
Retail density	29.21852945
Supermarket access	12.06210702
Tree canopy	0.590273322
Housing	—
Homeownership	79.23777749
Housing habitability	40.67753112
Low-inc homeowner severe housing cost burden	12.19042731
Low-inc renter severe housing cost burden	27.61452586
Uncrowded housing	47.8121391
Health Outcomes	—
Insured adults	26.49813936
Arthritis	79.8
Asthma ER Admissions	42.9
High Blood Pressure	64.8
Cancer (excluding skin)	87.6
Asthma	27.9
Coronary Heart Disease	81.5
Chronic Obstructive Pulmonary Disease	59.8
Diagnosed Diabetes	52.6
Life Expectancy at Birth	37.8
Cognitively Disabled	88.7
Physically Disabled	83.0
Heart Attack ER Admissions	7.5

Mental Health Not Good	28.5
Chronic Kidney Disease	64.9
Obesity	17.5
Pedestrian Injuries	92.5
Physical Health Not Good	37.9
Stroke	70.4
Health Risk Behaviors	—
Binge Drinking	30.9
Current Smoker	25.4
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	35.2
Elderly	90.4
English Speaking	42.3
Foreign-born	59.5
Outdoor Workers	11.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	72.4
Traffic Density	65.3
Traffic Access	23.0
Other Indices	—
Hardship	70.6
Other Decision Support	—
2016 Voting	23.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	69.0
Healthy Places Index Score for Project Location (b)	30.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	Land use information from site plan and project applicant.
Construction: Construction Phases	Construction schedule based on information from project applicant, with CalEEMod defaults for paving and architectural coating.
Construction: Off-Road Equipment	Equipment adjusted from defaults based on information from project applicant. Equipment over 50hp set to Tier 3 based on the Good Neighbor Guidelines. Excavator hp increased to reflect project conditions.
Construction: Trips and VMT	Worker and vendor trips increased to reflect information from project applicant.
Operations: Vehicle Data	Trip rate updated based on traffic report.
Operations: Fleet Mix	Fleet mix updated based on traffic report.

Operations: Energy Use	Building would be all electric.