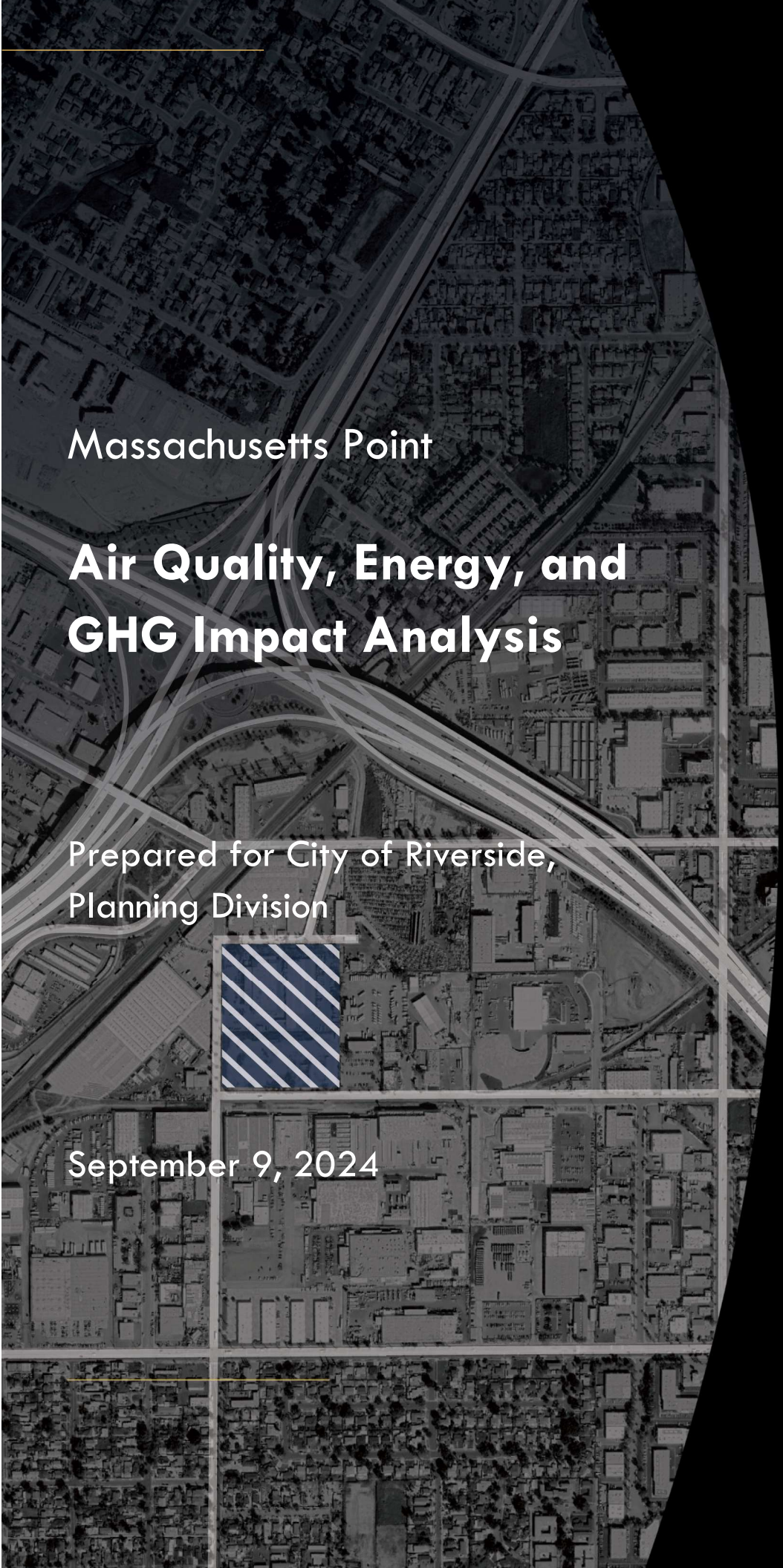

Massachusetts Point

Air Quality, Energy, and GHG Impact Analysis

Prepared for City of Riverside, Planning Division

September 9, 2024

Prepared by

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APPENDICES

1 INTRODUCTION

This *Air Quality, Energy, and Greenhouse Gas (GHG) Impact Analysis* has been prepared by EPD Solutions, Inc. (EPD) to analyze the potential impacts of the proposed Massachusetts Point Industrial Project (Project). The proposed Project is located at the northeast corner of Kansas Avenue and Massachusetts Avenue in the City of Riverside, which is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

The Project site is identified by Assessor's Parcel Numbers (APN) 210-130-015, 210-130-016, and 210-130-020, and totals an area of approximately 14.42 acres. The Project proposes to demolish the existing buildings located on-site totaling 99,850 square feet (SF) and construct two speculative industrial buildings totaling 199,850 SF on APN 210-130-015 and 210-130-016 (10.21-acre portion of site). Building 1 would be 99,900 SF and Building 2 would be 99,950 SF. No development is proposed on APN 210-130-020 and the existing use would remain in operation.

To provide a conservative analysis, the Project was assumed to allocate 20% of the total building area to cold storage. Development of the site would also include landscaping, utility connections, stormwater facilities, and pavement of parking areas and drive aisles. The regional location and site plan are provided in Figure 1, *Project Location*, and Figure 2, *Project Site Plan*.

Figure 1: Project Location

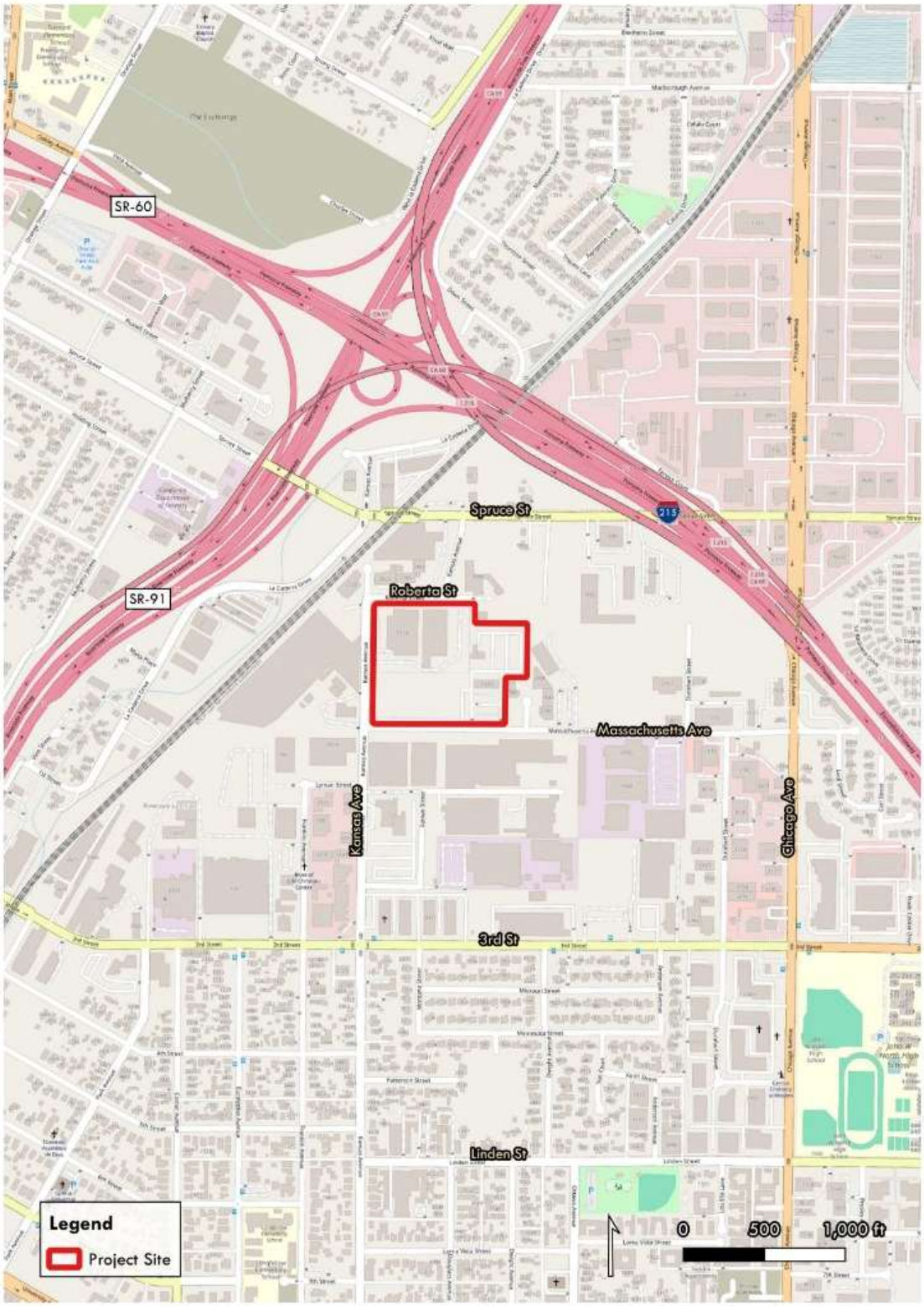
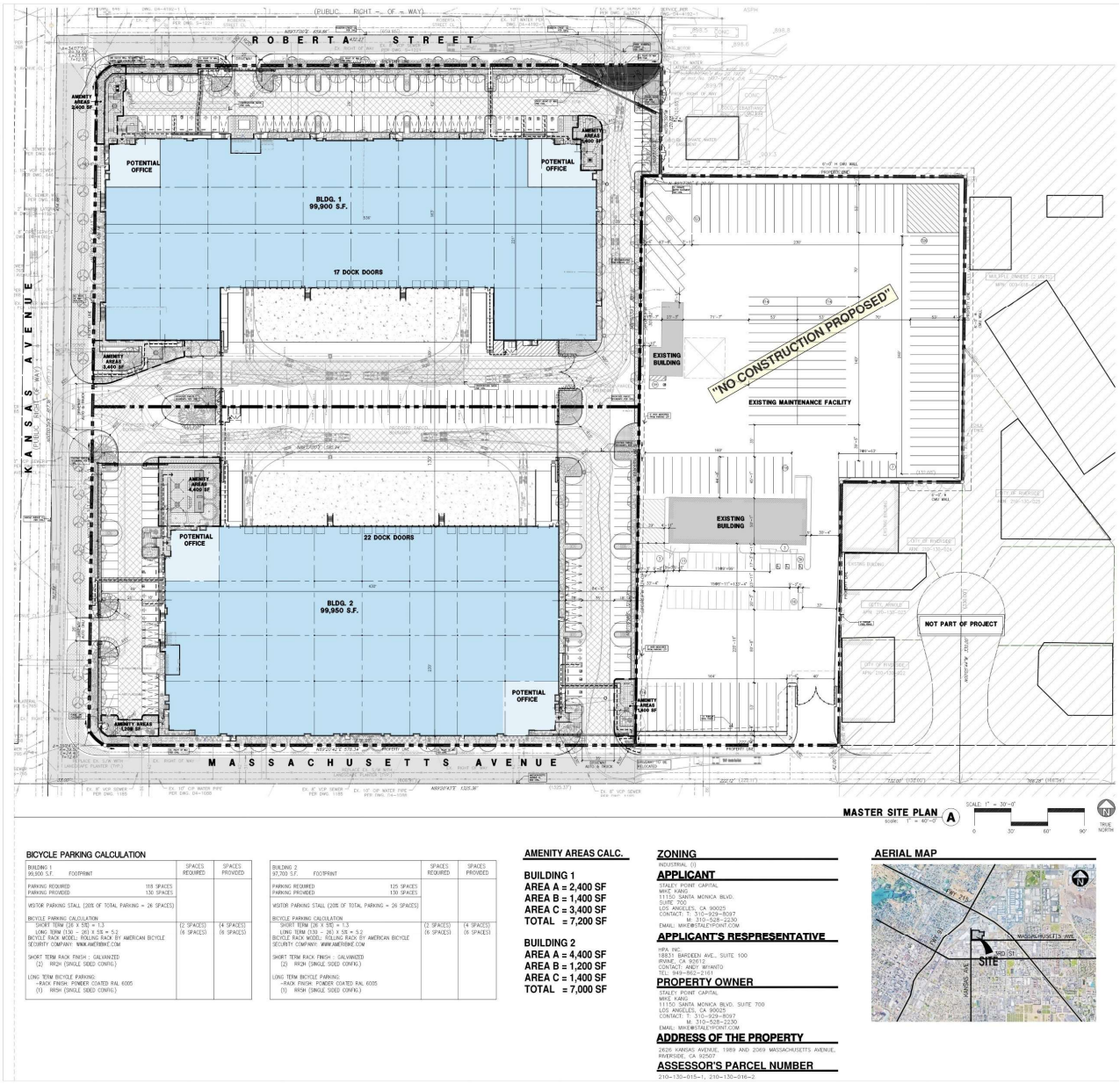


Figure 2: Project Site Plan



1.1 Purpose of the Report

To support the CEQA document for the proposed Project, this report analyzes the proposed Project's construction and operational impacts on air quality (emissions of criteria pollutants), energy usage, and greenhouse gas (GHG) emissions using the California Emissions Estimator Model (CalEEMod) Version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutants, energy usage, GHG emissions from direct and indirect sources, and quantify applicable air quality and GHG reductions achieved from mitigation. The thresholds of significance used are the adopted thresholds by the SCAQMD, California Air Resources Board (CARB), and the City of Riverside.

1.2 Summary of Conclusions

The conclusions of this analysis are as follows:

Air Quality: The Project's maximum daily and annual regional construction and net operational emissions would not exceed the SCAQMD's regional thresholds of significance. All construction activities would comply with applicable rules and regulations, including Rule 402 which governs emissions of air contaminants or other material that may cause injury or nuisance to any considerable number of persons or to the public, Rule 403 to minimize fugitive dust emissions, Rule 1113 which allows only low-volatile organic compounds (VOC) paints and Rule 1166 which sets requirements to control the emissions of VOC deposition from excavating, grading, handling, and treating VOC-contaminated soil (South Coast Air Quality Management District).

Projects that do not exceed the regional thresholds are assumed to not have a significant impact on a project level and cumulative level. All construction activities would comply with applicable SCAQMD rules and regulations. The toxic air contaminant (TAC) emissions generated by the Project would have a lower increased cancer risk than the SCAQMD health risk threshold. Odors produced by the construction would be minimal and temporary, and operation of the site would be minimal and similar to the surrounding land uses. Therefore, the proposed Project would have a less-than-significant air quality impact, and no mitigation would be required.

Energy: The proposed Project's energy consumption for construction activities related to redevelopment of the site for new industrial warehousing uses would be required to comply with existing fuel standards, machinery efficiency standards, and CARB requirements that limit idling of trucks. The Project would not result in significant impacts related to the State CEQA Guidelines thresholds for energy consumption:

a) Construction activities related to the proposed Project and the associated infrastructure are not expected to result in demand for fuel greater on a per-unit-of-development basis than any other development projects in Southern California.
b) The proposed Project would be required to meet the California Code of Regulations (CCR) Title 24 energy efficiency standards and comply with all applicable City energy codes, and the Project buildings would be solar ready in compliance with current Title 24 requirements. Therefore, the Project would not inhibit the use of and would allow for future flexibility relating to renewable energy.

The proposed Project would consume more electricity, natural gas, gasoline fuel, and diesel fuel than the two existing buildings currently occupying the site. However, through compliance with existing standards, the

Project would not result in a fuel demand on a per-development basis that is greater than other similar development projects in Southern California. Additionally, there are no unusual Project characteristics that would cause the use of construction equipment that would be less energy-efficient compared with other similar construction sites in other parts of the state. Therefore, the construction and operation of the Project would result in a less-than-significant impact related to inefficient, wasteful, or unnecessary energy use, and no mitigation would be required.

Greenhouse Gas: The proposed Project's construction and operational GHG emissions would total7,269 metric tons of carbon dioxide equivalent ($MTCO_2e$). Considering the emissions resulting from the existing buildings, the net new emissions generated by the proposed Project would result in an increase of 5,484 $MTCO_2e$ per year. The Project's net and total GHG emissions are below the SCAQMD's significance threshold of 10,000 $MTCO_2e$ per year. Additionally, the proposed Project would be consistent with the City's GHG reduction plans and policies within the City's General Plan and CARB's 2022 Scoping Plan. Therefore, the Project would have a less-than-significant impact on GHG emissions, and no mitigation would be required.

2 AIR QUALITY

2.1 Environmental Setting

Local Climate and Meteorology

Climate

The proposed Project is located within the South Coast Air Basin (SCAB), which incorporates all of Orange County, and parts of Los Angeles, Riverside, and San Bernardino Counties. The City of Riverside and the SCAB are under the jurisdiction of the SCAQMD.

As described in the City of Riverside General Plan 2025 Air Quality Element:

> *The Basin is topographically bounded by the Pacific Ocean to the west, with the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east. The topography and climate of the region combine to create an area of high air pollution potential in the Basin. Due to the low average wind speeds in the summer and a persistent daytime temperature inversion, emissions of hydrocarbons and oxides of nitrogen — the major by-products of vehicle engine combustion — have an opportunity to combine with sunlight in a complex series of reactions. These reactions produce a photochemical oxidant commonly known as "smog." Since the greater Los Angeles metropolitan region and the Inland Empire experience more days of sunlight than any other major urban area in the United States, except Phoenix, the smog potential in the region is higher than in most other major metropolitan areas in the country.* (City of Riverside, 2007)

Meteorology

Meteorological data used for the Project baseline was obtained from the City of Riverside's closest meteorological station, Riverside Municipal Airport. Based on data from this station, the temperatures in this region generally range from an average high of 80 degrees Fahrenheit (°F) in July to an average low of 51 °F in December. Annual precipitation averages approximately 10.34 inches, with the majority of precipitation accumulation occurring from December through March (U.S. Climate Data, 2025).

Criteria Pollutants

Criteria pollutants are air pollutants with State and national air quality standards that define allowable concentrations of these substances in ambient air. These criteria pollutants include:

- **Reactive Organic Gases (ROGs).** ROGs are hydrocarbon compounds that contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) are a precursor to ozone (O_3). ROGs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Not all ROGs have health effects; however, breathing some ROGs can irritate the eyes, nose and throat, can

cause difficulty breathing and nausea, and can damage the central nervous system or cause cancer. The United States Environmental Protection Agency (USEPA) and SCAQMD both use the terms VOC (volatile organic compounds) and ROG interchangeably in their regulatory frameworks (United States Environmental Protection Agency, 2024a). While there are nuanced differences in application, both agencies recognize VOC and ROG as equivalent terms within the scope of air quality management. Thus, the remainder of this report will reference the pollutant as VOC or ROG interchangeably.

- **Oxides of nitrogen (NO_x).** NO_x consists of nitric oxide (NO) and nitrogen dioxide (NO_2) and five other compounds, which are formed when nitrogen combines with oxygen. NO_x is typically created during combustion processes and are major contributors to smog formation and acid deposition. Increase in resistance to air flow and airway contraction occurs after short-term exposure to NO_X in healthy subjects and an increase in acute respiratory illness, including infections and respiratory symptoms in children, is associated with long-term exposure to NO_x.
- **Ozone (O_3)**: O_3 is a highly reactive gas and a major component of smog. It is formed in the atmosphere through photochemical reactions involving Reactive Organic Gases ROGs and NOx in the presence of sunlight. Prolonged exposure to ground-level ozone is known to cause difficulty in breathing, aggravate asthma, and contribute to the development of certain chronic respiratory diseases. The formation of ozone is reliant on low-level atmospheric ROGs and NOx concentrations, and therefore controlling emissions of these precursors is critical to reducing ozone pollution and improving air quality.
- **Carbon monoxide (CO).** CO is a colorless, odorless gas produced by sources that burn fuel such as vehicles, construction equipment, and building heating. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Motor vehicles are the primary source of CO in the SCAB and the highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with oxygen (O_2) transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency).
- **Sulfur dioxide (SO_2).** SO_2 is a respiratory irritant generated by burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. Exposure to SO_2 can result in a reduction in breathing capacity leading to breathing difficulties.
- **Particulate matter (PM_{10}).** PM_{10} is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. PM pollution is a major cause of reduced visibility (haze) which is caused by the scattering of light and consequently the significant reduction in air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects that include respiratory infections, asthma, lung cancer.
- **Particulate matter ($PM_{2.5}$).** $PM_{2.5}$ consists of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles, and other types of combustion sources. $PM_{2.5}$ results in a similar array of health impacts as PM_{10}.

- **Lead.** Lead is a toxic metal that, when released into the air, can cause developmental delays and learning difficulties amongst children from short term exposure. In adults, lead exposure can lead to high blood pressure, kidney damage, and reproductive complications. The accumulation of lead in the body over prolonged exposure can result in serious health problems, including neurological damage and an increased risk of cardiovascular diseases. Lead primarily comes from sources like industrial activities, lead-based paints, and vehicle emissions (leaded gasoline).

The emissions of these criteria pollutants were estimated using CalEEMod (Version 2022.1) to identify the construction and net operational emissions that would be generated by the proposed Project.

Sensitive Receptors

A sensitive receptor is defined as an individual who is most susceptible to negative health effects when exposed to air pollutants including children, the elderly, and adults with chronic health issues. Such receptors include residences, schools, elderly care centers, and hospitals where an individual can remain for 24 hours.

The sensitive receptor located nearest to the Project site is a short-term housing shelter that is 67.3 meters (221 meters) east of the Project site boundary, located at 2801 Hulen Place, where an individual could remain for up to 90 days.

Existing Air Quality

Regional Air Quality

The USEPA and the State have established air quality standards for six criteria pollutants and the SCAQMD monitors levels of various criteria pollutants at monitoring stations. The air quality in a region is considered to be in attainment if the measured ambient air pollutant levels do not exceed the air quality standards. Conversely, nonattainment means that an area has monitored air quality that does not meet the USEPA or State standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) was drafted by the CARB. The SIP outlines the measures that the State will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the USEPA designates the area as a maintenance area. As shown in Table 1, the Project site is in a federal nonattainment area for 1-hour and 8-hour ozone, $PM_{2.5}$, and lead, and a State nonattainment area for 1-hour and 8-hour ozone, PM_{10}, and $PM_{2.5}$.

Table 1: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone (1-hour)	Nonattainment	Nonattainment
Ozone (8-hour)	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment

Pollutant	State	Federal
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment
All others	Unclassified/Unclassified	No Standards

Source: California Air Resources Board. (2023). *Maps and Tables of Area Designations for State and National Ambient Air Quality Standards*. https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/areades/appc.pdf

Local Air Quality

The Project site is located within the Source Receptor Area (SRA) 23, Metropolitan Riverside. The closest monitoring station for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ is the SCAQMD Riverside County 1 Rubidoux Station (within SRA 23), approximately 3.4 miles northwest of the Project site. This station was identified as the closest monitoring station that would be most applicable to the City of Riverside air quality conditions.

The most recent three years of data available is shown in Table 2, *Project Area Air Quality Monitoring Summary 2021-2023*, and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2021 through 2023 was obtained from the SCAQMD Air Quality Data Tables (South Coast Air Quality Management District, 2021-2023). Data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

Table 2: Project Area Air Quality Monitoring Summary 2021-2023

Pollutant	Standard	Year		
		2021	2022	2023
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.117	0.122	0.139
Maximum Federal 8-Hour Concentration (ppm)		0.097	0.095	0.106
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	20	30	48
Number of Days Exceeding Federal 8-Hour Standard	> 0.070 ppm	55	70	69
Number of Days Exceeding State 8-Hour Standard	> 0.070 ppm	57	72	70
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	2.1	3.3	1.4
Maximum Federal 8-Hour Concentration	> 20 ppm	1.8	1.2	1.2
NOx				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.052	0.056	0.055
PM_{10}				
Maximum Federal 24-Hour Concentration (µg/m³)	> 150 µg/m³	76	153	166
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m³	0	1	1

Pollutant	Standard	Year		
		2021	2022	2023
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m^3	16	*55*	43
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 35 µg/m^3	82.1	38.5	48.7
Number of Days Exceeding Federal 24-Hour Standard	> 35 µg/m^3	10	1	1

ppm= parts per million
µg/m^3= micrograms per cubic meter of air
Source: SCAQMD Historical Air Quality Data by Year, Air Quality Data Tables for Metropolitan Riverside 1- SRA 23 Rubidoux Monitoring Station (AQS 06058001) (South Coast Air Quality Management District, 2023a).

2.2 Regulatory Setting

Federal

The USEPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The USEPA standards, along with the California standards, are shown in Table 3, *California and National Ambient Air Quality Standards*. The USEPA draws primarily from the Clean Air Act (CAA) to create their air quality mandates. As explained previously, the USEPA requires each State with federal nonattainment areas to prepare and submit an SIP as a part of its enforcement responsibilities. The SIP demonstrates the means to attain and maintain the federal standards set by the USEPA, and must integrate federal, State, and local plan components and regulations to reduce pollution within the SIP identified timeframe. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS and Title II provisions are related to mobile source emissions and require use of cleaner-burning gasoline and fuels.

State

The CARB is a department of the California Environmental Protection Agency and oversees air quality planning and control throughout California. CARB is responsible for coordination and oversight of State and local air pollution control programs in California and for implementation of the California Clean Air Act (CCAA), which requires CARB to establish the California Ambient Air Quality Standards (CAAQS). CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the criteria air pollutants described previously in Section 2.1, *Environmental Setting*. Applicable CAAQS are shown in Table 3, *Ambient Air Quality Standards*.

The CCAA requires all local air districts in the state to endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources.

Among CARB's other responsibilities are overseeing compliance of local air districts with California and federal laws, approving local air quality plans, submitting SIPs to the USEPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

Table 3: Ambient Air Quality Standards

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

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

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

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

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

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

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

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

Title 13, California Code of Regulations

The CARB adopted updates to Title 13 of the California Code of Regulations in response to the state's ongoing efforts to reduce greenhouse gas emissions and improve air quality in 2008. These regulations, which impact diesel-fueled commercial vehicles, have been designed to help reduce PM, NOx, and other vehicle emissions from the transportation sector, were initially adopted on September 19, 2011, with implementation phases beginning on January 1, 2012, and continuing through subsequent years.

Title 17, California Code of Regulations

Title 17 of the California Code of Regulations aims to reduce the harmful effects of diesel particulate matter (DPM), which is a significant public health concern. On August 27, 1998, CARB identified diesel PM as a toxic air contaminant, and in 2001, the board adopted a Risk Reduction Plan to significantly reduce diesel PM emissions from engines and vehicles.

Title 24, California Building Standards Code

The California Building Energy Efficiency Standards, set forth in Title 24 of the California Code of Regulations (CCR) (California Building Standards Code), establish energy performance requirements for residential and non-residential buildings within the state with the goal of enhancing energy conservation and sustainability. These standards are organized into two key components: Part 6 and Part 11. Part 6 pertains to energy efficiency regulations for both residential and nonresidential buildings, addressing aspects of building design and operation to minimize energy consumption. Part 11, known as the California Green Building Standards Code (CALGreen), is comprised of provisions for water efficiency, waste management, and construction practice. Both are described in further detail below.

CCR Title 24 is updated every three years to incorporate new energy efficient technologies and construction methods. The most recent approved update is the 2022 California Building Standards Code, which went into effect January 1, 2023.

Title 24, Part 6, California Energy Code

The 2022 Energy Code was approved by the California Energy Commission on August 11, 2021. Buildings whose permit applications are applied for on or after January 1, 2023 (and prior to future updates), such as what would occur with the proposed Project, must comply with the 2022 Energy Code. The 2022 Title 24 standards result in less energy use, thereby reducing air pollutant emissions associated with energy consumption. Title 24 standards require solar ready photovoltaic system roofs and encourages demand responsive technologies for new residential and industrial structures.

Title 24, Part 11, California Green Building Standards Code (CALGreen)

Title 24, Part 11 (CALGreen) focuses on promoting sustainable building practices in California. It outlines mandatory measures for energy efficiency, water conservation, material conservation, and indoor environmental quality in both residential and non-residential construction projects. CALGreen aims to reduce the environmental impact of buildings, enhance occupant health and comfort, and encourage resource efficiency throughout the State's building industry. CALGreen was developed in response to continued efforts to reduce GHG emissions associated with energy consumption. The current version of CALGreen is the 2022

California Green Building Standards Code, effective January 1, 2023. The 2022 CALGreen Building Standards Code has been adopted by the City of Riverside by reference of Municipal Code Section 16.07.020, excluding Appendix A4, A5, and A6.1, which were not adopted by the City of Riverside.

Regional

The SCAQMD is the air pollution control agency for the portion of the SCAB where the Project site is located. The role of the local air district is to protect the people and the environment of the SCAB from the effects of air pollution. SCAQMD shares responsibility with CARB for ensuring that air quality standards are achieved and maintained within the SCAB.

SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the State and federal ambient air quality standards. The 2022 AQMP is the most recent and was adopted on December 2, 2022. The 2022 AQMP includes a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures, to meet the following NAAQS:

- 1-hour ozone (120 parts per billion [ppb]) by 2023
- 8-hour ozone (70 ppb) by 2038
- 8-hour ozone (75 ppb) by 2032
- 8-hour ozone (80 ppb) by 2024
- 24-hour $PM_{2.5}$ (35 micrograms per cubic meter [$\mu g/m^3$]) by 2023
- Annual $PM_{2.5}$ (12 $\mu g/m^3$) by 2025

The SCAQMD establishes a program of rules and regulations to obtain attainment of the State and federal standards along with the AQMP. The rules and regulations applicable to this Project include, but are not limited to, the following:

- **SCAQMD Rule 201** requires any person constructing, altering, or operating equipment that may cause the issuance of air contaminants to first obtain a permit from SCAQMD. This permitting requirement ensures review of potential air quality impacts prior to equipment installation or operation (South Coast Air Quality Management District, 2004).
- **SCAQMD Rule 402** governs emissions of air contaminants or other material which cause injury, determinant, nuisance, or annoyance to any considerable number of persons or to the public. These apply to any odors that would be deemed objectionable to a substantial number of people. This rule does not apply to agricultural operations necessary for the growing of crops or the raising of fowl or animals (South Coast Air Quality Management District, 1976).
- **SCAQMD Rule 403** governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites (South Coast Air Quality Management District, 2005).
- **SCAQMD Rule 445** restricts wood burning devices from being installed into any new development and is intended to reduce the emissions of particulate matter for wood burning devices (South Coast Air Quality Management District, 2020).

- **SCAQMD Rule 461** governs the transfer of gasoline into and out of stationary storage tanks and vehicle fuel tanks within the SCAQMD. The rule requires the use of CARB certified enhanced vapor recovery systems to control emissions of VOCs during gasoline transfer operations. Rule 461 establishes equipment, operation, maintenance, testing, and recordkeeping requirements for both storage tanks and dispensing systems to ensure they are vapor tight and liquid tight (South Coast Air Quality Management District, 2022b).
- **SCAQMD Rule 1110.2** governs emissions from stationary internal combustion engines. The rule establishes emission limits for NOx, VOCs, and CO, and requires monitoring and testing to demonstrate compliance (South Coast Air Quality Management District, 2019).
- **SCAQMD Rule 1113** allows the use of only Low-Volatile Organic Compounds "(VOC)" paints (no more than 50 grams/liter (g/L) of VOC) (South Coast Air Quality Management District, 2016).
- **SCAQMD Rule 1166** sets requirements to control the emission of VOCs from excavating, grading, handling, and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition. Pursuant to SCAQMD Rule 1166, excavating or grading soil containing VOC materials shall:
    - Apply for, obtain, and operate pursuant to a mitigation plan pursuant to the requirements of SCAQMD Rule 1166. Monitor for VOC contamination at least once every 15 minutes commencing at the beginning of excavation or grading and record all VOC concentration readings. Handling VOC-contaminated soil at or from an excavation or grading site shall segregate VOC-contaminated stockpiles from non-VOC contaminated stockpiles such that mixing of the stockpiles does not take place. VOC-contaminated soil stockpiles shall be sprayed with water and/or approved vapor suppressant and adequately cover them with plastic sheeting for all periods of inactivity lasting more than one hour. A daily visual inspection shall be conducted of all covered VOC contaminated soil stockpiles to ensure the integrity of the plastic covered surfaces. Contaminated soil shall be treated or removed from an excavation or grading site within 30 days from the time of excavation (South Coast Air Quality Management District, 2001).
- **SCAQMD Rule 1470** sets operational hour requirements, stating that new stationary emergency diesel engines shall not operate more than 50 hours a year for maintenance and testing. Additionally, permits for Emergency Generators typically limit total operational hours to less than 200 hours a year (South Coast Air Quality Management District, 2021a).
- **SCAQMD Rule 2305** outlines the reduction of local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions with warehouses and associated mobiles sources. As the Project proposes one 99,850-SF building and one 99,950-SF building, it would thus be exempt to this rule as it applies to warehouses with greater than or equal to 100,000 SF of indoor floor space in any single building (South Coast Air Quality Management District, 2021b).
- **Regulation XIII governs** New Source Review (NSR) for new, relocated, or modified facilities that emit air contaminants. Regulation XIII requires the application of Best Available Control Technology (BACT), analysis of potential emission increases, and the use of emission reduction credits to offset increases in nonattainment pollutants (South Coast Air Quality Management District , 2020).

Toxic Air Contaminants

The SCAQMD also requires projects to analyze toxic air contaminants (TACs) and the health risks resulting from them. In the SCAB, SCAQMD has prepared a series on in-depth analysis called the Multiple Air Toxics Exposure Studies (MATES) these include MATES I-V. In these reports, diesel particulate matter (DPM) and other air toxics' relation to cancer risk incidence were analyzed. Reductions of cancer risk incidence of 54% between MATES IV and MATES V can be seen due to the increasingly stringent DPM emission regulations and improved DPM emission control technologies. The MATES V data shows that exposure to TACs in the SCAB increased the chances of developing cancer by 455 chances in one million, with DPM comprising 67.3% of the TACs analyzed in the report (South Coast Air Quality Management District, 2021c).

2.3 Significance Thresholds

Regional Emissions Thresholds

SCAQMD has adopted regional significance thresholds that identified the maximum daily emissions (pounds/day) for the criteria pollutants during construction and operation of a project. While incremental regional air quality impacts of an individual project are generally very small and difficult to measure, SCAQMD's regional maximum emission thresholds set standards to reduce the burden of SCAQMD to attain and maintain ambient air quality standards. Therefore, the adopted thresholds are both project specific and cumulative thresholds. If a project does not exceed the regional thresholds, then the project would be considered to have a less-than-significant project specific and cumulative impact (South Coast Air Quality Management District, 2023b). The regional thresholds are listed in Table 4, *SCAQMD Regional Emission Significance Thresholds*. These thresholds include the Project emissions generated both from on-site sources (such as off-road construction equipment and fugitive dust) and off-site sources (such as vehicle travel to and from the site).

Table 4: SCAQMD Regional Emissions Significance Thresholds

Air Pollutant	Maximum Daily Emissions (pounds/day)	
	Construction	Operational
ROGs	75	55
NOx	100	55
CO	550	550
SO_2	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55

Source: South Coast Air Quality Management District. (2023). *South Coast AQMD Air Quality Significance Thresholds*. https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25

Localized Significance Thresholds

Localized significance thresholds (LSTs) were also adopted by SCAQMD due to the potential of project-related construction or operational air emissions to exceed the State and national air quality standards in the Project vicinity, while not exceeding the regional emission significance thresholds adopted by the SCAQMD. These thresholds set the maximum rates of daily construction or operational emissions from a project site that would not exceed a national or State ambient air quality standard (South Coast Air Quality Management District, 2023a). The differences between regional thresholds and LSTs are as follows:

- Regional thresholds include all sources of project construction and operational emissions generated from on-site and off-site emission sources whereas the LSTs only consider the emissions generated from on-site emission sources.
- LSTs only apply to CO, NO_x, PM_{10}, and $PM_{2.5}$, while regional thresholds include both ROG and SO_2.
- Regional thresholds apply to emission sources located anywhere within the SCAQMD whereas the LSTs are location dependent and depend on the size of the project, and emission location relative to the nearest sensitive receptor.

SCAQMD provides screening look up tables in Appendix C of the SCAQMD *Final Localized Significance Threshold Methodology* (South Coast Air Quality Management District, 2008b) for projects that disturb less than or equal to 5 acres in size in a day. These tables were created to easily determine if the daily emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$ from a project could result in a significant impact to the local air quality. To calculate the area to be disturbed, *The SCAQMD Fact Sheet for Applying CalEEMod to Localized Significance Threshold* (South Coast Air Quality Management District, 2011) was used to calculate the appropriate disturbed area. The thresholds are determined by:

- Source receptor area (SRA), the geographic area within the SCAQMD that can act as both a source of emissions and a receptor of emission impacts (the Project site is located within SRA 23, Metropolitan Riverside);
- Size of the project; and
- Distance to the nearest sensitive receptor, which is defined as an individual who is most susceptible to negative health effects when exposed to air pollutants and includes children, the elderly, and adults with chronic health issues. Locations for such receptors include residences, schools, elderly care centers, and hospitals.

Table 5, *Construction Equipment Modeled in CalEEMod and Acres Disturbed per Day*, shows the amount of grading that would occur during the demolition, site preparation, and grading phases. As can be seen in Table 5, the phase with the most ground disturbance would be the grading phase, with a maximum of 4.0 acres of ground disturbance per day. Distance to the nearest sensitive receptor also determines the emission thresholds. The sensitive receptors closest to the Project site is a shelter, located at 2801 Hulen Place, where individuals can reside for over 24 hours, located 67.3 meters (221 feet) east of the Project's boundary. The construction and operation emission thresholds for 50 meters were used to provide a conservative analysis. Table 6, *Construction Localized Significance Thresholds*, show the thresholds for construction emissions for the proposed Project.

Table 5: Construction Equipment Modeled in CalEEMod and Acres Disturbed per Day

Activity	Equipment Type	Equipment Quantity	Operating Hours per Day	Acres Disturbed per Piece of Equipment per Day	Acres Disturbed per Day
Demolition	Concrete/Industrial Saws	1	8	0	0
	Excavators	3	8	0	0
	Rubber Tired Dozers	2	8	0.5	1.0
				Total Acres Disturbed Per Day	1.0
Site Preparation	Rubber Tired Dozers	3	8	0.5	1.5
	Crawler Tractors	4	8	0.5	2.0
				Total Acres Disturbed Per Day	3.5
Grading	Excavators	2	8	0	0
	Graders	1	8	0.5	0.5
	Rubber Tired Dozers	1	8	0.5	0.5
	Scrapers	2	8	1.0	2.0
	Crawler Tractors	2	8	0.5	1.0
				Total Acres Disturbed Per Day	4.0
				Maximum Acres Disturbed Per Day	**4.0**

Source: CalEEMod Output Sheets (Appendix C),

Table 6: Construction Localized Significance Thresholds

Air Pollutant	Maximum Daily Emissions (pounds/day)
NOx	268
CO	1,872.7
PM_{10}	33.3
$PM_{2.5}$	8.7

Source: Localized Significance Threshold Methodology, Appendix C, *LST Lookup Tables* (South Coast Air Quality Management District, 2008a)

According to the SCAQMD LST methodology, LSTs apply to Project stationary and on-site mobile sources. Projects that involve mobile sources spending long periods queuing and idling at a site, such as transfer facilities or warehousing and distribution buildings, have the potential to exceed the operational localized significance thresholds. As the Project's site is 10.21-acres, the threshold for 5-acres was utilized to yield a conservative analysis, and again utilizing the 50-meter distance from the nearest sensitive, which is 68 meters east of the Project site's boundary. These thresholds were calculated and are listed below, using the same LST methodology suggested by SCAQMD mentioned above utilizing the 5-acre threshold and 50-meter

distance from nearest receptor. Table 7, *Operational Localized Significance Thresholds*, show the thresholds for operational localized emissions for the proposed Project.

Table 7: Operational Localized Significance Thresholds

Air Pollutant	Maximum Daily Emissions (pounds/day)
NOx	302
CO	2,178
PM_{10}	10
$PM_{2.5}$	3

Source: Localized Significance Threshold Methodology, Appendix C: LST Lookup Tables (South Coast Air Quality Management District, 2008a)

2.4 Emissions Modeling Methodology

California Emissions Estimator Model

As previously described, CalEEMod Version 2022.1 was used to calculate emissions that would be generated by the proposed Project. The model runs for both construction and operational activity are attached (Appendix C and D).

The following non-default model assumptions were incorporated into the analysis:

- Land Use: The lot acreage was adjusted to match the site plan provided by the client.
- Construction Equipment: It was assumed that all equipment would be used for 8 hours per workday. Tractors/loaders/backhoes were replaced with crawler tractors in the site preparation and grading phases.
- Construction Phases: The building construction phase was shortened from 300 days to 200 days, to adhere to the approximately 14-month construction schedule provided by the client. Architectural coating phase was extended from 20 days to 35 days, to account for the size of the building façade.
- Demolition: The demolition of the existing buildings and hardscape is anticipated to amount to 24,902 tons of debris. See Appendix A for demolition calculations.
- Construction Earthmoving Activity: The Project would require 9,043 cubic yards (CY) of material imported during the grading phase. Approximately 500 CY of exported earthwork was included in the site preparation of the Project to conservatively account for potentially contaminated soil.
- Trips and Vehicle Miles Traveled (VMT): The default hauling trip length for the site preparation phase was increased from 20.0 miles to 56 miles to represent the travel distance of the Project to the Soil Safe landfill for contaminated soils in Adelanto, California, as recommended by Riverside County Department of Waste Resources (Riverside County Department of Waste Resources, 2025)
- Operational Trip Rates: The trip rate was adjusted to match the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, auto trip rates for general light industrial land use. Truck trip lengths were obtained from the WAIRE Menu Technical Report Appendix B, Truck Trip Lengths

(South Coast Air Quality Management District, 2021d). Vehicle splits were obtained using the daily trip total from EPD Solutions' Massachusetts Point VMT Memorandum (EPD Solutions, Inc., 2024). Truck trips were applied to the User Defined Industrial land use in CalEEMod, where two-axle trucks with a 15.3-mile trip length and a trip percentage of 34.50%, were applied to non-residential H-W (home to work trips); three-axle trucks with a 14.2-mile trip length and a trip percentage of 11.11% were applied to non-residential W-O (work to other); and four+ axle trucks with a 40-mile trip length and a trip percentage of 54.39% were applied to non-residential O-O (other to other trips).

- Operational Fleet Mixes: For fleet mix, vehicle splits were updated to match the operational trip generation provided by the VMT Memorandum that was prepared for the Project. The User Defined Industrial land use was utilized to analyze 100% of trucks (heavy-heavy duty truck [HHDT], medium-heavy duty trucks [MHDT], and light-heavy duty trucks 1 and 2 [LHDT1 and LHDT2]), and general heavy industrial and refrigerated warehouse land use defaults were utilized with the CalEEMod defaults to analyze 100% passenger vehicles only.
- Operational Off-Road Equipment: Assumed one compressed natural gas (CNG) forklift per 10,000 SF of warehouse area will be used for operational purposes, for a total of 20 forklifts (South Coast Air Quality Management Distrcit, 2014). The 20 forklifts were assumed to operate for 8 hours a day.
- Operational Equipment: Two diesel fire pumps and two diesel emergency generators were assumed for the Project, to provide a conservative estimate. The two fire pumps were assumed to each operate for 1 hour a day and would not exceed 50 hours per year of operating time for testing. The two emergency generators were each assumed to operate for 1 hour a day and would not exceed 200 hours per year of operating time for testing.

Emission Factors Model

The 2021 version of the Emissions Factor model (EMFAC) web database for use in SIP and transportation conformity analyses was released in January 2021. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is used by the CARB. EMFAC2021 is incorporated into CalEEMod Version 2022.1, and thus, included in the modeling that is provided in the appendices.

2.5 Project Impacts

Construction Emissions

Table 8, *Construction Schedule*, lists the Project's proposed estimated construction schedule from the CalEEMod output. Construction of the Project would occur over an approximately 14-month period. The proposed construction equipment list in Table 9, *Construction Equipment Inventory*, was generated from CalEEMod defaults. Table 10, *Construction Vehicle Trips,* is a summary of the worker, vendor, and hauling vehicles used throughout the Project's construction phases. Total hauling trips for demolition, site preparation, and grading phases are featured in Table 9 are calculated off-model and incorporate the anticipated soil import and export trips for the construction of the Project.

Table 8: Construction Schedule

Activity	Start Date	End Date	Total Days
Demolition	1/1/2026	1/29/2026	20
Site Preparation	1/30/2026	2/13/2026	10
Grading	2/14/2026	3/28/2026	30
Building Construction	3/29/2026	1/1/2027	200
Paving	1/4/2027	1/29/2027	20
Architectural Coating	2/1/2027	3/19/2027	35

Source: CalEEMod Output Sheets (Appendix C)

Table 9: Construction Equipment Inventory

Activity	Equipment	Number per day	Hours per day	Horse-power	Load Factor
Demolition	Concrete/Industrial Saws	1	8	33	0.73
	Excavators	3	8	36	0.38
	Rubber Tired Dozers	2	8	367	0.4
Site Preparation	Rubber Tired Dozers	3	8	367	0.4
	Crawler Tractors	4	8	84	0.37
Grading	Excavators	2	8	36	0.38
	Graders	1	8	148	0.41
	Rubber Tired Dozers	1	8	367	0.4
	Scrapers	2	8	423	0.48
	Crawler Tractors	2	8	87	0.43
Building Construction	Cranes	1	8	367	0.29
	Forklifts	3	8	82	0.2
	Generator Sets	1	8	14	0.74
	Tractors/Loaders/Backhoes	3	8	84	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	81	0.42
	Paving Equipment	2	8	89	0.36
	Rollers	2	8	36	0.38
Architectural Coating	Air Compressors	1	8	37	0.48

Source: CalEEMod Output Sheets (Appendix C)

Table 10: Construction Vehicle Trips

Activity	Daily Worker Trips[1]	Daily Vendor Trips[1]	Total Haul Trips[2]
Demolition	15	0	2,223
Site Preparation	18	0	63
Grading	20	0	1,130
Building Construction	84	33	0
Paving	15	0	0
Architectural Coating	17	0	0

Source: CalEEMod Output Sheets (Appendix C)
[1] One-way trips per day.
[2] Total trips over entirety of Project construction phase, total haul trips were calculated off-model based on the import/export volumes to and from the Project site.

The Project's estimated maximum daily regional and localized construction emissions are shown in Table 11, *Regional Construction Emission Estimates*, and Table 12, *Localized Construction Emission Estimates*. As shown in Table 12, the construction of the Project would not exceed the SCAQMD localized emission significance thresholds and would therefore have a less-than-significant localized construction air quality impact. All CalEEMod output sheets can be found in Appendix C and D.

Table 11: Regional Construction Emission Estimates

Construction Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
2026						
Demolition	2.7	44.9	25.6	0.2	24.1	5.4
Site Prep	3.9	35.9	32.2	0.1	8.0	4.5
Grading	3.5	33.0	30.5	0.1	5.0	2.6
Building Construction	1.5	12.1	20.4	<0.1	1.8	0.7
Maximum Daily Emissions 2026	3.9	44.9	32.2	0.2	24.1	5.4
2027						
Building Construction	1.4	11.6	18.6	<0.1	1.8	0.7
Paving	1.4	7.0	10.7	<0.1	0.5	0.3
Architectural Coating	54.7	1.2	2.3	<0.1	0.2	0.1
Maximum Daily Emissions 2027	54.7	11.6	18.6	<0.1	1.8	0.7
Maximum Daily Emission 2026-2027	**54.7**	**44.9**	**32.2**	**0.2**	**24.1**	**5.4**
SCAQMD Significance Thresholds	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Output Sheets (Appendix C)

Table 12: Localized Construction Emission Estimates

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
2026				
Demolition	20.7	19.0	17.9	3.4
Site Prep	34.6	31.0	7.4	4.3
Grading	30.0	28.7	4.1	2.3
Building Construction	10.7	28.1	0.8	0.8
Maximum Daily Emissions 2026	34.6	31.0	17.9	4.3
2027				
Building Construction	10.2	14.0	0.4	0.3
Paving	6.9	10.0	0.3	0.3
Architectural Coating	1.1	1.5	<0.1	<0.1
Maximum Daily Emissions 2027	10.2	14.0	0.4	0.3
Maximum Daily Emission 2026-2027	**34.6**	**31.0**	**17.9**	**4.3**
SCAQMD Localized Significance Thresholds	268	1,827.7	33.3	8.7
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: CalEEMod Output Sheets (Appendix C)

Operational Emissions

Long-term operational emissions would be generated resulting from the day-to-day operations, which include:

- Mobile-source emissions: automobiles traveling to and from the Project site.
- Area-source emissions: landscaping maintenance activities and periodic architectural coatings.
- Energy-source emissions: natural gas and electricity consumption.
- Off-Road-source emissions: equipment used during operational activities and maneuvering, including CNG forklifts.
- Stationary-source emissions: stationary combustion sources located on the Project site, including diesel emergency generators and diesel fire pumps.

Based on the Project trip generation, the Project is expected to generate 974 daily trips and a net increase of 487 trips when considering the existing buildings (EPD Solutions, Inc., 2024). The mix of vehicles includes passenger vehicles, light-duty trucks, medium-duty trucks, and heavy-duty trucks, all types of vehicles that would be associated with an industrial project. For the regional analysis of operational emissions, the default vehicle trip distances provided in the CalEEMod model were applied to the Project passenger trips. Heavy

Truck trips utilized the SCAQMD recommended truck trips lengths discussed in Section 2.4, *Emissions Modeling Methodology*. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1 & LHDT2)/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks (HHDT)/4+-axle.

The Project's estimated maximum daily regional operational emissions are shown in Table 13, *Regional Operational Emission Estimates*. As noted in Table 13, *Regional Operational Emissions Estimates*, the operation of the Project would not exceed the SCAQMD regional or localized emission significance thresholds. All CalEEMod output sheets can be found in Appendix C and D.

Table 13: Regional Operational Emission Estimates

Operational Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Mobile	3.3	28.1	42.1	0.3	16.8	4.7
Area	6.2	0.1	8.7	<0.1	0.0	0.0
Energy	0.1	2.1	1.8	<0.1	0.2	0.2
Off-Road	<0.1	17.7	176.2	<0.1	<0.1	<0.1
Stationary	1.6	4.4	4.0	<0.1	0.2	0.2
Total Project Operational Emissions	**11.3**	**52.4**	**232.7**	**0.3**	**17.2**	**5.1**
Existing Use Operational Emissions	1.9	31.6	65.3	0.4	23.1	6.3
Net New Emissions	**9.3**	**20.8**	**167.4**	**<0.1**	**-6.0**	**-1.3**
SCAQMD Significance Thresholds	*55*	*55*	*550*	150	150	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Output Sheets (Appendix C, D)

The Project's estimated maximum daily localized operational emissions are shown in Table 14, *Localized Operational Emissions Estimates*. As discussed previously in Section 2.3, *Significance Thresholds,* the Project's site is 10.21-acres, the thresholds for 5-acres were utilized to yield a conservative analysis and utilizing the 50-meter distance from the nearest sensitive receptor, which is 68 meters east of the Project site's boundary. Additionally, no credit was taken for the existing use. As seen in Table 14, the net operation of the Project would not exceed the SCAQMD regional or localized emission significance thresholds. All CalEEMod output sheets can be found in Appendix C and D.

Table 14: Localized Operational Emission Estimates

Operational Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Mobile	3.6	6.6	0.2	<0.1
Area	0.1	8.7	<0.1	<0.1
Energy	2.1	1.8	0.2	0.2
Off-Road	17.7	176.2	<0.1	<0.1
Stationary	4.4	4.0	0.2	0.2
Total Project Operational Emissions	**27.8**	**197.3**	**0.6**	**0.4**
SCAQMD Localized Significance Thresholds	302	2,178	10	3
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: CalEEMod Output Sheets (Appendix C, D)

Toxic Air Contaminants

The construction of the Project would result in short-term diesel particulate matter (DPM) emissions from the use of off-road heavy-duty equipment and medium heavy-duty vendor truck vehicles. DPM is a listed carcinogen and TAC in the State of California. To determine the health risk associated with a project, the two important factors to consider are the dose of the substance and the duration of the exposure. According to the Office of Environmental Health Hazard Assessment (OEHHA), Heath Risk Assessments (HRAs) are used to determine the impact of exposure of TAC emissions on sensitive receptors. The period/duration of the assessment is based on a 30-year exposure.

The DPM emissions from construction equipment and mobile emissions would be the most significant TAC emissions on sensitive receptors during the construction and long-term operation of the Project. The HRA prepared for the Project concluded that the maximum cancer risk for a sensitive receptor during construction was 0.63 per million for a 1.21-year exposure, a 5.59 per million maximum cancer risk for operation, and a combined construction and operational cancer risk of 3.82 per million. These would be less than the 10 per million threshold (EPD Solutions, Inc., 2025). Therefore, the construction, operation, and combined construction and operational results of the Project would be presumed to have a less-than-significant impact.

Air Quality Management Plan Consistency

As described previously, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the State and federal ambient air quality standards. Currently, SCAQMD has adopted the 2022 AQMP (South Coast Air Quality Management District, 2022a). The 2022 AQMP is focused on attaining the 2015 8-hour ozone standard of 70 parts per billion. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NOx technologies in other applications), best management practices, co-benefits from

existing programs (e.g., climate and energy efficiency), incentives, and other Clean Air Act measures to achieve the 2015 8-hour ozone standard.

SCAQMD's CEQA Handbook provides the following two criteria to determine whether a project would be in conflict with the AQMP:

- The project would generate population and employment growth that would be inconsistent with Southern California Association of Governments' (SCAG) growth forecasts; or
- The project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to the SCAG's growth forecasts, and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities located within the SCAG region. Therefore, if the level of housing and employment growth related to a project is consistent with the applicable assumptions used in the development of the AQMP, the Project would not jeopardize attainment of the air quality levels identified in the AQMP.

According to the City's current General Plan, the Project site has a General Plan land use of Industrial (I) and is zoned as Industrial (I)-Innovation District (ID) Overlay Zone. Within the ID Overlay Zone, the Project site is located within the Employment Emphasis (EE) and Housing Emphasis (HE) subdistricts. The Project proposes an amendment to the City's zoning code and zoning map to change the site's Innovation District (ID) Overlay Zoning subdistrict from Employment Emphasis (EE) and Housing Emphasis (HE) to Industrial Emphasis (IE), which will allow for the proposed industrial buildings. The proposed zone change also includes modification of the development standards in the IE overlay zone. The General Plan land use designation of Industrial (I) would allow for a maximum floor area ration (FAR) of 0.6. The proposed Project includes two new industrial buildings – Building 1 would have footprint of 99,900 SF with a FAR of 0.45 and Building 2 would have a footprint of 97,700 SF with a FAR of 0.45. Therefore, the proposed Project is consistent with the land use designation for the site. Additionally, the proposed Project would be consistent with the zoning for the site, with the approval of the change of zone. Thus, the proposed Project would not induce unplanned growth in the area.

Based on employment generation rates listed in Table 3.G of the Riverside County General Plan EIR, which lists an employment generation factor for light industrial uses of 1 employee per 1,030 SF, implementation of the proposed Project would generate 194 jobs (County of Riverside, 2015). The site's existing use was estimated to accommodate approximately 97 employment opportunities, thus, the Project would result in an increase of 97 additional employment opportunities upon operation. According to the SCAG, employment in the City of Riverside is expected to increase by 45,900 jobs between 2019 and 2050 (Southern California Association of Governments, 2024). Based on these growth projections, full buildout of the Project would represent approximately 0.4 percent of projected employment growth within the City of Riverside. Additionally, it is anticipated that the employment base for both the construction and operational phases of the proposed Project would come from the existing population in the region. Thus, implementation of the Project would not exceed the SCAG's employment growth assumptions. As a result, the proposed Project would be consistent with Consistency Criterion No. 1.

Consistency Criterion No. 2 refers to the California Ambient Air Quality Standards. An impact would occur if the long-term emissions associated with the proposed Project would exceed SCAQMD's regional significance thresholds for operation-phase emissions. The quantified air quality emissions analysis shows that the proposed Project would not exceed any air quality standards. Therefore, the proposed project would be consistent with Criterion No. 2.

As the Project would be consistent with both Criterion No. 1 and 2, impacts related to consistency with the AQMP would be less than significant.

Odors

Odors would be produced during the construction of the Project due to the operation of heavy-duty off-road equipment. The primary odor emitted would be diesel particulate matter (DPM) from the vendor trucks and heavy-duty off-road equipment. This odor may be noticeable by nearby residents; however, these odors would be expected and not necessarily objectionable and would not be a new nuisance to the area as the existing operation is also truck intensive. These odors would also dissipate quickly and would be temporary. Therefore, due to the temporary and non-objectionable to a substantial number of people nature of the odor produced during construction, the odor impact would be less than significant.

For operational odor emissions, the SCAQMD *CEQA Air Quality Handbook* associates the following land uses with odor complaints:

- Agricultural Uses
- Chemical Plants
- Composting Activities
- Dairies
- Fiberglass Molding
- Food Processing Plants
- Landfills
- Refineries
- Wastewater Treatment Plants

The Project does not propose any of the above land uses, would be similar to the existing and surrounding land uses, and is required to comply with SCAQMD Rule 402, Nuisance, which states:

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

Thus, impacts associated with odor sources produced by the Project would be less than significant.

2.6 Conclusion

The proposed Project's maximum daily regional and localized construction and operational emissions would not exceed SCAQMD's regional thresholds of significance, as detailed in Tables 11 through 14. All construction and operational activities will comply with applicable SCAQMD rules and regulations and not exceed any criteria pollutant thresholds. Additionally, the proposed Project is consistent with SCAQMD'S 2022 AQMP, reflecting adherence to regional air quality management goals and standards.

The following PDF is proposed and would prevent impacts related to operational air quality emissions:

> **PDF AQ-1**: The Project would be designed to include the installation of signs at every truck exit providing directional information to the trucks' routes. This design feature would prevent nearby sensitive receptors from further exposure to criteria pollutants during the operation of the Project. No quantitative credit was taken in the air quality analysis for this design feature.

Finally, odors produced during construction would be temporary and not significantly objectionable, and during operation, the proposed Project involves land uses that typically do not generate significant odor complaints and would comply with SCAQMD Rule 402. Therefore, the proposed Project would result in less-than-significant air quality impacts without requiring mitigation.

3 ENERGY

3.1 Environmental Setting

The operation of the proposed Project would consume three main sources of energy in the form of electricity, natural gas, and transportation energy resources (gasoline and diesel).

Electricity

Electricity in the Project area is provided by Riverside Public Utilities (RPU). RPU provides electric power to more than 300,000 customers within its 82 square-mile service area (Riverside Public Utilities, 2025). RPU purchases a mix of renewable sources (solar, wind, hydro, etc.) as well as non-renewable sources (coal, natural gas, nuclear, etc.). The Power Content Label (City of Riverside Riverside Public Utilities, 2023) states that the power mix for RPU as of 2023 is as follows:

- Non-Renewable Sources (53.6%)
- Eligible renewable (46.4%: biomass, biowaste, geothermal, hydroelectricity, solar, wind)

The California Independent Service Operator (ISO) is a nonprofit public benefit corporation that is tasked with the operation of California's power grid and is responsible for maintaining grid reliability. They are also responsible for approving improvements and additions to the power grid required to accommodate the State's electrical needs. The ISO works with other western US states to ensure grid reliability in cases of over and under production within the state. The California Energy Commission (CEC) *Total System Electric Generation* table (City of Riverside Riverside Public Utilities, 2023) shows that the California in-state annual generation was 203,257 GWh and the total import amount is 83,962 GWh, for a total 287,220 GWh of energy for California in 2022.

Natural Gas

The California Public Utilities Commission (CPUC) serves as the regulator of natural gas for the Southern California Gas Company (SoCalGas), Pacific Gas & Electric, San Diego Gas & Electric (SDG&E), and several smaller and independent utilities and storage operators. The Project area is served by SoCalGas, which serves 21 million customers (Southern California Gas Company, 2022).

Natural gas is provided by both in-state and out-of-state sources, allocated by market supply and demand. The CPUC is tasked with overseeing the purchase and transmission of natural gas, by working with in-state sources and the Federal Energy Regulatory Commission to acquire out-of-state sources through multiple interstate and international pipelines.

According to the *2022 California Gas Report* (California Gas and Electric Utilities, 2022), the 2021 Gas Supply Taken for SoCalGas in billion cubic feet (Bcf) is as follows:

- Core Residential Customers – demand was 224 Bcf
- Core Commercial Customers – demand was 77 Bcf
- Core Industrial Customers – demand was 20.4 Bcf

- Noncore Commercial Customers – demand was 17.4 Bcf
- Noncore Industrial Customers – demand was 48.6 Bcf
- Refinery Industrial Customers – demand was 91.7 Bcf
- Industrial/Commercial/Cogeneration <20 megawatts (MW) – demand was 25.4 Bcf
- Refinery-Related Cogeneration – demand was 23 Bcf
- Enhanced Oil Recovery-Related Cogeneration – demand was 4.1 Bcf
- Electric Generation, Including Large Cogeneration <20 MW – demand was 191 Bcf
- Wholesale/International – demand was 132.6 Bcf

Transportation Energy Resources

In addition to consuming electricity and natural gas, the construction and operation of the Project would consume fuel for transportation, predominately petroleum (gasoline and diesel fuel). As of January 2024, the Department of Motor Vehicles stated that there were 35.7 million registered vehicles in California (California Department of Motor Vehicles, 2024), which would consume an estimated 17.7 billion gallons of fuel a year (calculated using the EMFAC 2021 projection estimates). Of the 17.7 billion gallons consumed, 14.5 billion gallons are gasoline, and 3.2 billion gallons are diesel fuel.

3.2 Regulatory Setting

Energy use and consumption are regulated by federal and State agencies. The federal agencies that impact energy policies and programs include the US Department of Transportation, US Department of Energy, and US Environmental Protection Agency. The State agencies that impact energy policies include the CPUC and California Energy Commission (CEC). The following are energy-related regulations applicable to the proposed Project.

Title 24, Part 6 (California Energy Code) and Part 11 (CALGreen). As described above in Section 2.2, [*Air Quality] Regulatory Setting*, the Title 24 Building Standards Codes, which include the California Energy Code and CALGreen that make up the California Building Energy Efficiency Standards, are updated every three years to incorporate new energy efficiency methods.

AB 1493 Pavley Fuel Efficiency Regulations. California AB 1493 required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. The Pavley standards implement improvements in fuel efficiency intended to result in less fuel consumption, thus reducing GHG emissions.

City of Riverside Municipal Code Chapter 6.06 The provisions of Chapter 6.06 apply to all businesses, including industrial and commercial facilities, requiring the separation of recyclables, organic materials, and general waste. Businesses are expected to provide adequate waste containers, implement waste diversion practices, and ensure proper training for employees to minimize contamination in recycling and composting streams as to meet the state's diversion goals.

California Renewable Portfolio Standard. These standards require retail sellers of electric services to provide 33% of total retail sales of electricity from renewable resources by 2020.

Clean Energy and Pollution Reduction Act of 2015. The standards implemented by this Act (SB 350) requires the State to:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 45% by 2027.
- Achieve a 100% clean, zero-carbon electricity grid by 2045, with an interim target of 60% by 2030, in alignment with the goals of SB 100 (2018)
- Double the energy efficiency in existing buildings by 2030.
- Reorganize the Independent System Operator (ISO) to develop more regional electricity transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

3.3 Assumptions and Thresholds

The State CEQA Guidelines do not have specific thresholds for energy consumption. Rather, the question in Appendix G, VI Energy (a) asks, "[Would the project] Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?." and (b) "[Would the project] Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?" (California Energy Commission, 2023). Therefore, for the purpose of this analysis, a significant impact would occur if:

a) The project design and/or location encourages wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, as well as the use of fuel by vehicles anticipated to travel to and from the project.
b) The project design impedes the growth of future renewable energy developments.

The following assumptions were used to calculate the energy consumption of the proposed Project:

- Construction equipment fuel consumption derived from ARB Offroad2021 emission model.
- Fuel Consumption from vehicle travel derived from ARB EMFAC2021 emission model.
- Electrical, natural gas, and fuel usage was derived from the CalEEMod model Version 2022.1.

3.4 Project Impacts

Construction Consumption

Electricity and Natural Gas Usage

Due to the Project size and the fact that construction is temporary, the electricity used would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption. The electric power used would be for as-necessary construction tools, lighting, and electronic equipment such as computers used inside temporary construction trailers. Natural gas is not anticipated to be needed for construction activities. Any consumption of natural gas would be minor and negligible in comparison to the operation of the proposed Project.

Petroleum Fuel Usage

The construction equipment associated with construction activities (off-road/heavy duty vehicles) would rely on diesel fuel as would vendor and haul trucks involved in delivering building materials and removing the demolition debris from the Project site. Construction workers would travel to and from the Project site throughout the duration of construction, and for a conservative analysis it is assumed that construction workers would travel in gasoline-powered passenger vehicles.

Table 15, *Construction Equipment Fuel Usage*, used the total fuel consumption and horsepower-hour data contained within the ARB OffRoad2021 emission model for specific types of diesel construction equipment. It should be noted that the total fuel consumption is a conservative analysis and would likely overstate the amount of fuel usage, as specific construction equipment is not expected to operate during the entire duration of the construction activity (i.e., crane) but instead would be more limited in duration and frequency. Table 16, *Estimated Project Construction Vehicle Fuel Usage*, summarizes the Project's construction vehicle fuel usage based on vehicle miles traveled and fuel usage factors contained in the ARB EMFAC2021. The trips included are those from worker vehicles, vendor vehicles, and haul vehicles. Table 17, *Total Construction Fuel Usage*, shows the overall fuel consumption for construction of the proposed Project. Fuel calculations can be found in Appendix B.

Table 15: Construction Equipment Fuel Usage

Activity	Phase Duration (Days)	Equipment	Number Per Day	Hours per day	Horse-power	Load Factor	Total Horse power-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Demolition	20	Concrete/Industrial Saws	1	8	33	0.73	3,854	0.04190252	161
		Excavators	3	8	36	0.38	6,566	0.05110175	336
		Rubber Tired Dozers	2	8	367	0.4	46,976	0.04695772	2,206
Site Preparation	10	Rubber Tired Dozers	3	8	367	0.4	35,232	0.046957715	1,654
		Crawler Tractors	4	8	84	0.37	9,946	0.05036589	501
Grading	30	Excavators	2	8	36	0.38	6,566	0.05110175	336
		Graders	1	8	148	0.41	14,563	0.05205489	758
		Rubber Tired Dozers	1	8	367	0.4	35,232	0.04695772	1,654
		Scrapers	2	8	423	0.48	97,459	0.04779533	4,658
		Crawler Tractors	2	8	87	0.43	17,957	0.09054728	1,626
Building	200	Cranes	1	8	367	0.29	170,288	0.05349335	9,109
		Forklifts	3	8	82	0.2	78,720	0.03375829	2,657
		Generator Sets	1	8	14	0.74	16,576	0.09054728	1,501
		Tractors/Loaders/Backhoes	3	8	84	0.37	149,184	0.05163856	7,704
		Welders	1	8	46	0.45	33,120	0.05129285	1,699
Paving	20	Pavers	2	8	81	0.42	10,886	0.05360434	584
		Paving Equipment	2	8	89	0.36	10,253	0.05349335	548
		Rollers	2	8	36	0.38	4,378	0.030686275	134
Architectural Coating	35	Air Compressors	1	8	37	0.48	4,973	0.030686275	153
								Total	37,979

Source: Fuel Calculation Sheet (Appendix B), CalEEMod Output Sheets (Appendix C)

Table 16: Estimated Project Construction Vehicle Fuel Usage

Construction Source	Total Trips	VMT	Fuel Rate	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Haul Trucks	3,416	141,151	6.35	22,225	0
Vendor Trucks	6,600	136,640	9.07	14,842	0
Worker Vehicles	18,775	694,675	30.92	0	22,470
			Total	**37,068**	**15,304**

Source: Fuel Calculation Sheet (Appendix B), CalEEMod Output Sheets (Appendix C)

Table 17: Total Construction Fuel Usage

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Construction Vehicles	37,068	22,470
Off-Road Construction Equipment	37,979	0
Total	**75,047**	**22,470**

Source: Fuel Calculation Sheet (Appendix B), CalEEMod Output Sheets (Appendix C)

As seen in Table 17, the Project is estimated to consume approximately 22,470 gallons of gasoline and approximately 75,047 gallons of diesel fuel. According to fuel consumption information obtained from EMFAC2021, approximately 500,969,721 gallons of gasoline and 135,661,936 gallons of diesel fuel would be consumed in Riverside County in 2027. Thus, the construction of the Project would marginally increase the annual fuel usage within the county by <0.01% for annual gasoline consumption, and 0.06% for annual diesel consumption. The Project construction would have a negligible effect on local and regional energy supplies within Riverside County.

Construction Energy Efficiency

CARB regulates emissions from construction equipment and the equipment used for Project construction would comply with CARB regulations and California fuel economy/emissions standards, which would be verified through the City's construction permitting process. The Project does not include any unusual construction processes that would require a substantial increased need for energy resources. The construction equipment and methods used by the Project would not be more energy intensive than typical construction activities. The Project would require an estimated 24,902 tons of debris to be removed from the Project site over the demolition phase duration of 20 days. Additionally, this analysis conservatively assumes 500 CY of export during the site preparation phase occurring over 10 days, to account for potentially contaminated soil on the site. Lastly, the Project also would require 9,043 CY of soil import that would occur over 30 days during the grading phase. That import and export of materials is a typical construction use of energy and is not more intensive than typical excavation activities and truck trips that would comply with CARB and SCAQMD Rules. The import of this material would not be wasteful or unnecessary, as it is required for construction of the buildings and loading docks for operational efficiency of energy resources. It would not be inefficient as it would occur during a definitive, and temporary period of construction and in accordance with applicable regulations.

Construction contractors would be required to comply with applicable CARB regulations regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CCR Title 13, *Motor Vehicles*, Section 2449(d)(3), *Idling*, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that "grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling." In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to five minutes of idling. Idling restrictions and the use of newer engines and equipment would result in less fuel consumption and wasteful or unnecessary consumption of energy would not occur. Overall, Project construction would not result in inefficient, wasteful, or unnecessary consumption of energy.

Operational Consumption

The operation of the proposed Project would consume electricity, natural gas, and petroleum. The energy consumption is provided in Table 18, *Project Annual Operational Energy Requirements*. Electricity and natural gas consumption were determined by the annual CalEEMod output sheets in Appendix C and the EMFAC fuel rates in Appendix B for all on-road vehicles. The gasoline consumption rates utilize the same assumptions that were used for the worker vehicles, and can be found in Appendix B. The utilization and operation of 20 CNG forklifts, as well as two diesel fire pumps and two emergency generators, were incorporated into the Project's annual operational energy usage. Similarly to the proposed Project, the existing building's annual energy consumption of electricity and natural gas was determined using CalEEMod, found in Appendix D, while the EMFAC was utilized to determine annual diesel and gasoline consumption rates of on-road vehicles, which can also be found in Appendix B. As shown in Table 18, the proposed Project is expected to require more electricity, natural gas, gasoline, and diesel fuel than the existing on-site use. However, it would remain consistent with that of similar sized projects, would result in a marginal increase in fuel usage in Riverside County, and would thus not constitute an inefficient use of energy. These fuel rates were also retrieved from EMFAC and can be found in Appendix B.

Table 18: Project Annual Operational Energy Requirements

Electricity (Kilowatt-Hours)		
Proposed Project	2,493,702	
Existing Use	955,472	
Natural Gas (Thousands British Thermal Units)		
Proposed Project	7,924,546[1]	
Existing Use	4,288,590	
Petroleum (Gasoline) Consumption		
	Annual VMT	Gallons of Gasoline Fuel
Proposed Project	4,042,423	130,759
Existing Use	2,952,844	95,515
Petroleum (Diesel) Consumption		
	Annual VMT	Gallons of Diesel Fuel[2]
Proposed Project	3,568,847	453,441
Existing Use	281,430	35,145
Net Total Energy Use		
Net Electricity (Kilowatt-Hours)		**1,538,230**
Net Natural Gas (Thousands British thermal Units)		**3,635,956**
Net Gasoline Consumption (Gallons)		**35,244**
Net Diesel Consumption (Gallons)		**418,296**

Source: Fuel Calculation Sheet (Appendix B), CalEEMod Output Sheets (Appendix C)
[1] Inclusive of the 20 on-site CNG forklifts presumed for the operation of the Project. See Fuel Calculation Sheet (Appendix B).
[2] Inclusive of the two diesel emergency generators and two diesel fire pumps presumed for the operation of the Project. See Fuel Calculation Sheet (Appendix B).

Future Renewable Energy Developments

The proposed Project would be required to meet the CCR Title 24 energy efficiency standards in effect during permitting of proposed Project and comply with all applicable City energy codes. The City's administration of the CCR Title 24 requirements includes review of design components and energy conservation measures that occurs during the permitting process, which ensures that all requirements are met. In addition, Project design and operation would comply with State Building Energy Efficiency Standards, including appliance efficiency regulations and green building standards. The Project buildings would be solar ready in compliance with current Title 24 requirements, which would allow for the future installation of rooftop solar. As such, the Project would not inhibit the use of and would allow for future flexibility relating to renewable energy.

3.5 Conclusion

As described above, the Project would not result in significant impacts related to energy. Construction activities related to the proposed Project and the associated infrastructure are not expected to result in demand for fuel greater on a per-unit-of-development basis than any other development projects in Southern California. Additionally, the Project would comply with regulations implemented that reduce emissions, such as those related to construction vehicle idling.

The Project's energy consumption for construction activities related to redevelopment of the site for new industrial warehousing uses would be permitted to require compliance with existing fuel standards, machinery efficiency standards, and CARB requirements that limit idling of trucks. Through compliance with existing standards, the Project would not result in a fuel demand on a per-development basis that is greater than other similar development projects in Southern California. There are no unusual Project characteristics that would cause the use of construction equipment to be less energy efficient compared with other similar construction sites in other parts of the state. Therefore, the construction and operation of the Project would result in a less-than-significant impact related to inefficient, wasteful, or unnecessary energy use, and no mitigation would be required.

The proposed Project would consume more electricity, natural gas, gasoline, and diesel than the site's existing use than the buildings currently occupying the site. However, the operation of the Project would also be similar to other similarly sized industrial projects within the City. Additionally, the Project would be required to meet the CCR Title 24 energy efficiency standards and comply with all applicable City energy codes, and the Project buildings would be solar ready in compliance with current Title 24 requirements. Therefore, the Project would not inhibit the use of and would allow for future flexibility relating to renewable energy and would result in a less-than-significant impact related to the impediment of future renewable energy development.

4 GREENHOUSE GAS EMISSIONS

4.1 Environmental Setting

Gases that trap heat in the atmosphere are often referred to as greenhouse gases (GHGs). GHGs are released into the atmosphere by both natural and anthropogenic activity. The primary GHGs from development projects are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). These GHGs are considered the leading contributors to the increase in global average temperatures observed during the 20th and 21st centuries. In addition, the International Panel on Climate Change (IPCC) recognizes other GHGs that contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (International Panel on Climate Change, 2001). A brief overview of the major GHGs relevant to the development Project are defined below:

- CO_2 is an odorless and colorless GHG that is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include burning of coal, oil, natural gas, and wood.
- CH_4 is reactive with oxidizers, halogens, and other halogen-containing compounds and is released as part of the biological processes. Anthropogenic processes such as growing rice, raising cattle, fossil-fuel combustion, and biomass burning have added to the atmospheric concentration of CH_4.
- N_2O is produced by microbial processes in soil and water, fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions. It is used as an aerosol spray propellant in whipped cream cans, in potato chip bags to keep chips fresh, and in rocket engines and race cars.

The CARB compiles GHG inventories for the State of California. Based upon the 2023 GHG inventory data for the 2000-2021 GHG emissions period, California emitted an average 381.3 million metric tons of CO_2 equivalent ($MMTCO_2e$) – CO_2 and other GHG emissions converted into CO_2 based on impact on global warming – per year (California Air Resorces Board, 2023a).

SCAG prepared a report to analyze and project GHG emissions through 2035 (Southern California Association of Governments, 2012). The last year of historical emissions data available in this report was 2008, where California emissions were 480.9 $MMTCO_2e$ and SCAG GHG emissions were 230.2 $MMTCO_2e$, which equates to 48% of California's GHG emissions. The report projected that by 2020, SCAG would emit 215.8 $MMTCO_2e$, a reduction of 6.26%, and using the CARB 2021 GHG inventory data, would comprise 56.6% of California's total GHG emissions (California Air Resources Board, 2023b).

The cumulative effect of GHGs is global climate change that has the potential to cause adverse effects to human health. Increases in the Earth's ambient temperatures are anticipated to result in shifts in weather patterns such as more intense heat waves, greater droughts and wildfires in some areas, and flooding in others. Higher ambient temperatures can cause more heat-related deaths, increase disease survival rates, and result in food shortages from agricultural losses.

4.2 Regulatory Setting

Federal

Clean Air Act

In 2007, through Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), the United States Supreme Court held that the United States Environmental Protection Agency (USEPA) has authority to regulate GHGs. As such, the United States Supreme Court ruled that the USEPA should be required to regulate CO2 and other GHGs as pollutants under Section 202(a)(1) of the federal Clean Air Act.

State

California Assembly Bill 1493 - Pavley

The California Legislature adopted AB 1493 requiring the adoption of regulations to reduce GHG emissions in the transportation sector. CARB, EPA, and the United States Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) have coordinated efforts to develop fuel economy and GHG standards for model 2017-2025 vehicles. The GHG standards are incorporated into the "Low Emission Vehicle" (LEV) Regulations.

The regulation reduces GHGs from new cars by 34% from 2016 levels by 2025. The regulation improves emissions and fuel economy of gasoline and diesel-powered cars, and provides for zero-emission technologies, such as full battery electric cars, plug-in hybrid electric vehicles (EV), and hydrogen fuel cell cars.

California Executive Order S-3-05 – Statewide Emission Reduction Targets

Executive Order S-3-05 was signed by Governor Schwarzenegger in June 2005. Executive Order S-3-05 establishes statewide emission reduction targets through the year 2050:

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

California Assembly Bill 32 (AB 32), Global Warming Solutions Act of 2006 (Chapter 488, Statutes of 2006)

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHGs. The 2017 Scoping Plan identifies how the State will reach the 2030 climate target to reduce GHG emissions by 40% from 1990 levels and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80% below 1990 levels.

The AB 32 Scoping Plan also anticipates that local government actions will result in reduced GHG emissions because local governments have the primary authority to plan, zone, approve, and permit development to accommodate population growth and the changing needs of their jurisdictions. The Scoping Plan also relies on the requirements of Senate Bill 375 (discussed below) to align local land use and transportation planning for achieving GHG reductions.

The Scoping Plan must be updated every five years to evaluate AB 32 policies and ensure that California is on track to achieve the current GHG reduction goal. In 2017, CARB released the proposed Second Update to the Scoping Plan, which identifies the State's post-2020 reduction strategy. The Second Update reflected the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32.

On December 15, 2022, CARB adopted the 2022 Scoping Plan. The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the State to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, the 2022 Scoping Plan advocates for compliance with a local GHG reduction strategy consistent with CEQA Guidelines Section 15183.5.

SB 375 – Sustainable Communities and Climate Protection Act of 2008

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

Executive Order B-30-15 – 2030 Statewide Emission Reduction Target

Executive Order B-30-15 established an interim statewide GHG reduction target of 40% below 1990 levels by 2030. Under this Executive Order, all State agencies with jurisdiction over sources of GHG emissions are required to continue to develop and implement emissions reduction programs to reach the State's 2050 target. According to the Governor's Office, this Executive Order is in line with the scientifically established levels needed in the United States to limit global warming below 2°C – the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels.

Senate Bill 32 (Chapter 249, Statutes of 2016)

SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. A related bill that was also approved in 2016,

AB 197 (Chapter 250, Statutes of 2016) creates a legislative committee to oversee regulators to ensure that CARB is not only responsive to the Governor, but also the Legislature.

Executive Order B-55-18 and SB 100

SB 100 raises California's Renewable Portfolio Standards requirement to 50% renewable resources by December 31, 2026, and to achieve 60% by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total amount sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. Executive Order B-55-18 establishes a carbon neutrality goal for the State of California by 2045 and sets a goal to maintain net negative emissions thereafter.

Title 24, Part 6, California Energy Code

Title 24 Part 6, the California Energy Code, was adopted to reduce California's energy consumption. Measures that the California Energy Code requires development projects to implement include, but are not limited to, the following:

- **Short-term bicycle parking**. Provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
- **Long-term bicycle parking**. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.
- **Designated parking for clean air vehicles**. Provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Title 24 Part 6 Table 5.106.5.2.
- **Electric vehicle charging stations**. Facilitate the future installation of electric vehicle supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. Additionally, installation of raceway conduit and panel pawer requirements for medium- and heavy-duty electric vehicle supply equipment would be required for warehouses, grocery stores, and retail stores.
- **Outdoor light pollution reduction**. Outdoor lighting systems shall be designed to meet the backlight, uplight, and glare ratings per Title 24 Part 6 Table 5.106.8.
- **Construction waste management**. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste.
- **Excavated soil and land clearing debris**. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.
- **Recycling by occupants**. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals.
- **Water conserving plumbing fixtures and fittings**. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
- **Water closets**. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush.

- **Urinals**. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush.
- **Showerheads**. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute at 80 psi. When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi.
- **Faucets and fountains**. Non-residential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute. Metering faucets shall not deliver more than 0.20 gallons per cycle. Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle.
- **Outdoor potable water use in landscaped areas**. Non-residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.
- **Water meters.** Separate submeters or metering devices shall be installed for new buildings or where any tenant within a new building or within an addition is projected to consume more than 1,000 gallons per day.
- **Outdoor water use in rehabilitated landscape projects equal to or greater than 2,500 SF**. ~~Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit.~~ Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF require the landscape to comply with water efficiency standards outlined in the California Department of Water Resources' MWELO.
- **Commissioning**. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building Project to verify that the building systems and components meet the owner's or owner representative's Project requirements.

Title 24, Part 11, California Green Building Standards Code (CALGreen)

Title 24, Part 11 (CALGreen) focuses on promoting sustainable building practices in California. It outlines mandatory measures for energy efficiency, water conservation, material conservation, and indoor environmental quality in both residential and non-residential construction projects. CALGreen aims to reduce the environmental impact of buildings, enhance occupant health and comfort, and encourage resource efficiency throughout the state's building industry. CALGreen was developed in response to continued efforts to reduce GHG emissions associated with energy consumption. The current version of CALGreen is the 2022 California Green Building Standards Code, effective January 1, 2023.

Local

City of Riverside General Plan

The City adopted the *2025 General Plan* in November 2007. The 2025 General Plan currently recognizes the need for the City to reduce energy use and GHG emissions (City of Riverside, 2007).

Riverside Restorative Growth: Economic Prosperity Action Plan and Climate Action Plan

The *2016 Riverside Restorative Growth: Economic Prosperity Action Plan and Climate Action Plan* (CAP) outlines strategies to strengthen the city's economy while addressing climate change. The Economic Prosperity Action Plan focuses on job creation, business development, and sustainable infrastructure improvements. The CAP sets goals to reduce greenhouse gas emissions through energy efficiency, renewable energy, and sustainable transportation. Together, these plans aim to ensure Riverside's growth aligns with environmental sustainability for a resilient and prosperous future.

4.3 Significance Thresholds

The SCAQMD Greenhouse Gas Emissions (GHG) CEQA Significance Threshold Working Group has identified GHG emissions thresholds for land use projects in the SCAQMD *Draft Guidance Document – Interim CEQA GHG Significance Threshold* that could be used by lead agencies (Southern California Air Qualtiy Management District, 2010). The Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold.

The City of Riverside utilizes the SCAQMD Air Quality Significance Thresholds document as threshold guidance for TACs, odor, and GHG emissions.

The 10,000 $MTCO_2e$/year threshold was developed and recommended by SCAQMD based on substantial evidence as provided in the *Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold* (Greenhouse) document and subsequent Working Group meetings, the latest of which occurred in 2010 being Working Group #15. This guidance document established the recommendation that all lead agencies adopt the 10,000 $MTCO_2e$/year threshold for industrial projects. SCAQMD has not withdrawn its support of the interim threshold and all documentation supporting the interim threshold remains on the SCAQMD website on a page that provides guidance to CEQA practitioners for greenhouse gas analyses (and where all SCAQMD significance thresholds for regional and local criteria pollutants and TACs are also listed) (South Coast Air Quality Management District, n.d.). The City of Riverside has utilized the SCAQMD 10,000 $MTCO_2e$ for previous industrial projects within the city; therefore, this analysis utilizes 10,000 $MTCO_2e$ as the threshold.

4.4 Project Impacts

Project GHG Emissions

To analyze the GHG impacts of the proposed Project, CalEEMod Version 2022.1 was used. The Project's construction GHG emissions are shown in Table 19, *Project Construction GHG Emissions*, and the overall construction and net operational emissions are shown in Table 20, *Project GHG Emissions*. The CalEEMod outputs are attached in Appendix C and D. The construction emissions are amortized over 30 years pursuant to SCAQMD methodology. Table 19 shows that the Project would emit a total of 850 annual $MTCO_2e$ over the duration of construction, with 2026 having the highest emission level (826 $MTCO_2e$). Amortized over 30 years, the Project's construction emissions would be approximately 28 $MTCO_2e$ per year.

As shown in Table 21, the amortized construction emissions added to the operational emissions (mobile, area, energy, water, waste, refrigeration, off-road, and stationary sources) would result in a total of 7,241 $MTCO_2e$, which would not exceed the SCAQMD adopted GHG threshold of 10,000 $MTCO_2e$. The primary source of emissions generated by the proposed Project is mobile emissions, with an annual emission rate of 5,426 $MTCO_2e$. The existing operational GHG emissions from the existing buildings were estimated to be 1,785 $MTCO_2e$, resulting in a net increase of 5,484 $MTCO_2e$ per year when taking the existing industrial buildings into consideration. The Project's net and total GHG emission results are both below the SCAQMD significance threshold of 10,000 $MTCO_2e$ per year.

Table 19: Project Construction GHG Emissions

Activity	Annual GHG Emissions ($MTCO_2e$)
2026	826
2027	23
Total Emissions	**850**
Total Emissions Amortized Over 30 Years	28

Source: CalEEMod Output Sheets (Appendix C)

Table 20: Project GHG Emissions

Activity	Annual GHG Emissions ($MTCO_2e$)
Project Operational Emissions	
Mobile	5,426
Area	4
Energy	921
Water	127
Waste	74
Refrigeration	183
Off-Road	461
Stationary	45
Total Project Gross Operation Emissions	**7,241**
Amortized Construction Emissions	28
Total Project Emissions	**7,269**
Existing Emissions	1,785
Net New Emissions	**5,484**
Significance Threshold	10,000
Threshold Exceeded?	**No**

Source: CalEEMod Output Sheets

Project Consistency with 2022 CARB Scoping Plan

As stated previously, in 2016 the City of Riverside adopted the Riverside Restorative Growthprint (RRG) , which consisted of a GHG emission inventory for the city and a Climate Action Plan (CAP) which builds on the Western Riverside council of Governments (WRCOG) Subregional CAP commitments. The CAP includes an inventory of existing 2007 CAP emissions from community-wide operations, which includes residents and businesses within the City, as well as emissions from governmental operations. The CAP also provides community-wide and government operations emissions forecasts for 2020 and 2035 based on growth associated within the City (Western Riverside Council of Governments, 2022). The CAP establishes a reduction goal of approximately 26 percent below 2007 baseline emission levels (3,024,066 $MTCO_2e$ community-wide, and 122,525 $MTCO_2e$ for government operations) by 2020 to reach the goals set forth in AB 32 (1990 levels by 2020). While the City's CAP is not a qualified reduction plan as defined by the State CEQA Guidelines, it does propose measures and policies on community-wide and government levels that will support the City's reduction goals. The proposed Project is consistent with the RRG CAP measures are detailed in Table 21, *Riverside Restorative Growthprint CAP Consistency Summary*.

The City of Riverside's General Plan policies related to GHG and the Project's consistency with these actions are featured below in Table 22, *Project Consistency with City General Plan Policies*. These six policies set goals to identify GHG emission activities and reduction measures, which the proposed Project would not interfere with (City of Riverside, 2007).

The 2022 CARB Scoping Plan Update sets the GHG emission reduction target for 2045 at 85% below 1990 levels, which was codified by SB 32. Table 22, *2022 Scoping Plan Consistency Summary,* shows Project consistency with CARB's 2022 Scoping Plan. As seen in Table 22, the Project would be consistent with the 2022 Scoping Plan.

Table 21: Riverside Restorative Growthprint CAP Consistency Summary

Goal or Policy	Consistency
Measure T-2: Bicycle Parking. Provide additional options for bicycle parking.	**Consistent.** The proposed Project would provide bicycle racks and bicycle parking spaces.
Measure T-3: End of Trip Facilities. Encourage use of non-motorized transportation modes by providing appropriate facilities and amenities for commuters.	**Consistent.** The proposed Project would provide bicycle racks and bicycle parking spaces for commuters to encourage alternative modes of transportation including non-motorized transportation modes.
Measure T-6: Density. Improve jobs-housing balance and reduce vehicle miles traveled by increasing household and employment densities.	**Consistent.** The Project is located within the City of Riverside, a housing-rich region, meaning that more housing is provided than employment opportunities in the area. Implementation of the proposed Project would create up to an additional 194 jobs. Therefore, the proposed Project would create jobs in a job-poor area, consistent with this policy
Measure T-19: Alternative Fuel & Vehicle Technology and Infrastructure. Promote the use of alternative fueled vehicles such as those powered by electric, natural gas, biodiesel, and fuel cells by Riverside residents and workers.	**Consistent.** The proposed Project would provide a total of 42 electric vehicle charging stations (EVCS) (38 EVCS, 2 EVCS Standard Accessible, and 2 EVCS Van Accessible), which will promote the use of electric vehicles by employees and visitors of the site.

Goal or Policy	Consistency
Measure W-1: Water Conservation and Efficiency. Reduce per capita water use by 20% by 2020.	**Consistent.** Project would be designed and constructed to meet all applicable standards under the City's Municipal Code and CALGreen.
Measure SW-1: Yard Waste Collection. Provide green waste collection bins community-wide.	**Consistent.** The Project would comply with applicable solid waste requirements from the City and State.
Measure SR-2: 2013 California Building Energy Efficiency Standards (Title 24, Part 6). State's energy efficiency building standards as codified in the Code of Regulations, Title 24, Part 6 (referred to as Title 24).	**Consistent.** The proposed Project would be designed and constructed to meet all applicable standards under Title 24. The most recent update was the 2022 California Green Building Code Standards that became effective on January 1, 2023.

Table 22: Project Consistency with City General Plan Policies

General Plan Goal or Policy	Consistency
Policy AQ-1.10: Encourage job creation in job-poor areas as a means of reducing vehicle miles traveled.	**Consistent.** The Project is located in the City of Riverside, a housing-rich region, meaning that more housing is provided than employment opportunities in the area. Implementation of the proposed Project would create up to an additional 194 jobs. Therefore, the proposed Project would create jobs in a job-poor area, consistent with this policy.
Policy AQ-1.15: Establish land use patterns that reduce the number and length of motor vehicle trips and promote alternative modes of travel.	**Consistent.** The Project site is located near an existing bus services, which would allow Project site employees convenient access to transit.
Policy AQ-5.3: Continue and expand use of renewable energy resources such as wind, solar, water, landfill gas, and geothermal sources.	**Consistent.** The Project would comply with the 2022 Title 24, Part 6 building energy including efficiency and renewable energy requirements.
Policy AQ-5.6: Support the use of automated equipment for conditioned facilities to control heating and air conditioning.	**Consistent.** The Project will comply with the latest Title 24 and CALGreen code that support efficient heating and air conditioning systems.
Policy AQ-5.7: Require residential building construction to meet or exceed energy use guidelines in Title 24 of the California Administrative Code.	**Not Applicable.** The proposed Project does not propose residential buildings.
Policy AQ-8.17: Develop measures to encourage that a minimum of 40% of the waste from all construction sites throughout Riverside be recycled by the end of 2008.	**Consistent.** The proposed Project would comply with the latest CALGreen code, which requires a minimum of 65 percent of construction waste be recycled.

Table 23: 2022 Scoping Plan Consistency Summary

Action	Consistency
GHG Emissions Reductions Relative to the SB 32 Target	
40% Below 1990 levels by 2030.	**Consistent.** The Project would comply with the 2022 Title 24, Part 6 energy requirements, as well as Title 24, Part 11 building standards, along with other local and State initiatives that aim to achieve the 40% below 1990 levels by 2030 goal.
Smart Growth/Vehicle Miles Traveled VMT	
VMT per capita reduced 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045.	**Consistent.** The proposed Project would provide bicycle racks and bicycle parking spaces to encourage alternative modes of transportation. The Project is consistent with the growth and land use assumptions in the Southern California Association of Government's 2022 Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy (which was utilized for growth estimates in the CARB Scoping Plan) including reductions in VMT per capita. The plan aims to reduce VMT per capita by 25% below 2019 levels by 2030 and 30% by 2045, which aligns with targets set in the CARB Scoping Plan. Thus, the Project would not interfere with VMT reduction targets and measures.
Light-Duty Vehicle (LDV) Zero-Emission Vehicles (ZEVs)	
100% of LDV sales are ZEV by 2035.	**Consistent.** The proposed Project is a speculative industrial building that could potentially involve the manufacturing and storage of LDV ZEVs. The future tenant would be required to comply with the CARB's Advanced Clean Truck Regulation that would require truck manufacturers to transition from diesel trucks to zero emission trucks. Additionally, the Project would be designed and constructed in accordance with the 2022 Title 24 Part 6 and Part 11 requirements, which includes constructing infrastructure to allow for electric vehicle charging.
Truck ZEVs	
100% of medium- and heavy-duty vehicle (MHDV) sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report).	**Consistent.** The proposed Project is a speculative industrial building that could potentially involve the manufacturing and storage of (MHDV) ZEVs. The future tenant would be required to comply with the CARB's Advanced Clean Truck Regulation that would require truck manufacturers to transition from diesel trucks to zero emission trucks. Additionally the Project, would be designed and constructed in accordance with the 2022 Title 24 Part 6 and Part 11 requirements, which includes constructing infrastructure to allow for electric vehicle charging.
Aviation	
20% of aviation fuel demand is met by electricity (batteries) or hydrogen (fuel cells) in 2045. Sustainable aviation fuel meets most or the rest of the	**Not Applicable.** The proposed Project would not utilize aviation fuel.

Action	Consistency
aviation fuel demand that has not already transitioned to hydrogen or batteries.	
Ocean-Going Vessels (OGV)	
2020 OGV At-Berth regulation fully implemented, with most OGVs utilizing shore power by 2027. 25% of OGVs utilize hydrogen fuel cell electric technology by 2045.	**Not Applicable.** The proposed Project would not utilize any OGVs.
Port Operations	
100% of cargo handling equipment is zero-emission by 2037. 100% of drayage trucks are zero emission by 2035.	**Not Applicable.** The proposed Project would not directly impact operations at the closest major port (Port of Long Beach).
Freight and Passenger Rail	
100% of passenger and other locomotive sales are ZEV by 2030. 100% of line haul locomotive sales are ZEV by 2035. Line haul and passenger rail rely primarily on hydrogen fuel cell technology, and others primarily utilize electricity.	**Not Applicable.** The proposed Project would not involve any freight or passenger rail operations.
Oil and Gas Extraction	
Reduce oil and gas extraction operations in line with petroleum demand by 2045.	**Not Applicable.** The proposed Project would not involve oil and gas extraction operations.
Petroleum Refining	
Carbon capture and sequestration (CCS) on majority of operations by 2030, beginning in 2028. Production reduced in line with petroleum demand.	**Not Applicable.** The proposed Project would not involve any petroleum refining.
Electricity Generation	
Sector GHG target of 38 million metric tons of carbon dioxide equivalent (MMTCO2e) in 2030 and 30 MMTCO2e in 2035. Retail sales load coverage 13420 gigawatts (GW) of offshore wind by 2045. Meet increased demand for electrification without new fossil gas-fired resources.	**Not Applicable.** The Project would not generate electricity.
New Residential and Commercial Buildings	
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	**Consistent.** The Project would comply with the 2022 Title 24, Section 6 Building Codes energy requirements, including installing electrical wiring for all built in appliances.
Existing Residential Buildings	
80% of appliance sales are electric by 2030 and 100% of appliance sales are electric by 2035.	**Not Applicable.** The proposed Project would not involve any existing residential buildings.

Action	Consistency
Appliances are replaced at end of life such that by 2030 there are 3 million all-electric and electric-ready homes—and by 2035, 7 million homes—as well as contributing to 6 million heat pumps installed statewide by 2030.	
Existing Commercial Buildings	
80% of appliance sales are electric by 2030, and 100% of appliance sales are electric by 2045. Appliances are replaced at end of life, contributing to 6 million heat pumps installed statewide by 2030.	**Consistent.** The Project would be consistent and comply with Title 24 Section 6 requirements for commercial buildings, including complying with 100% electric appliances beginning in 2029, replacing an existing building that was not constructed to be consistent with the current 2022 Title 24 Building Code requirements.
Food Products	
7.5% of energy demand electrified directly and/or indirectly by 2030; 75% by 2045.	**Consistent.** The Project would potentially include up to 20% of the total building area for cold storage (which was conservatively included in this analysis), which has the potential to store food products. The proposed Project would comply with the 2022 Title 24 Building Codes in Section 6 and would be required to meet increasing standards set by the State. Therefore, the Project would be consistent with meeting current and future policies concerning the storage of food products as speculative cold storage warehouses.
Construction Equipment	
25% of energy demand electrified by 2030 and 75% electrified by 2045.	**Consistent.** The proposed Project would be required to use construction equipment that is registered by CARB and meet CARB's standards. CARB sets its standards to be in line with the goal of reducing energy demand by 25% in 2030 and 75% in 2045.
Chemicals and Allied Products; Pulp and Paper	
Electrify 0% of boilers by 2030 and 100% of boilers by 2045. Hydrogen for 25% of process heat by 2035 and 100% by 2045. Electrify 100% of other energy demand by 2045.	**Consistent.** As the Project proposes speculative industrial buildings, there is a potential for the Project to involve the production and/or storage of chemicals and allied products like pulp and paper. The Project would comply with the energy demands of the 2022 Title 24 Section 6 Building Codes and would comply with the electricity and hydrogen requirement by 2045 for the production of chemicals and allied products.
Stone, Clay, Glass, and Cement	
CCS on 40% of operations by 2035 and on all facilities by 2045. Process emissions reduced through alternative materials and CCS.	**Consistent.** As the Project proposes speculative industrial buildings, there is a potential for the Project to involve the production and/or storage of stone, clay, glass and/or cement. The Project would comply with the energy demands of the 2022 Title 24 Section 6 Building Codes and would promote the implementation and use of CCS for operations by 2035 and on all operations and facilities by 2045.
Other Industrial Manufacturing	

Action	Consistency
0% energy demand electrified by 2030 and 50% by 2045.	**Consistent.** The proposed Project is a speculative industrial building that could potentially allow for manufacturing. A future manufacturing tenant would be required to meet the energy demand goals of 50% by 2045, and the proposed Project would be constructed to comply with Title 24, Part 6 Building energy requirements, including increases in onsite energy generation requirements and improved insulation reducing energy consumption in industrial manufacturing operations.
Combined Heat and Power	
Facilities retire by 2040.	**Not Applicable.** The proposed Project would not involve any existing combined heat and power facilities.
Agriculture Energy Use	
25% energy demand electrified by 2030 and 75% by 2045.	**Not Applicable.** The proposed Project would not involve any agricultural uses.
Low Carbon Fuels for Transportation	
Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.	**Not Applicable.** The proposed Project would not involve any production of biofuels.
Low Carbon Fuels for Buildings and Industry	
In 2030s, biomethane135 blended in pipeline. Renewable hydrogen blended in fossil gas pipeline at 7% energy (~20% by volume), ramping up between 2030 and 2040. In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters.	**Not Applicable.** The proposed Project would not involve any production of fuels for buildings and/or industry.
Non-Combustion Methane Emissions	
Increase landfill and dairy digester methane capture. Some alternative manure management deployed for smaller dairies. Moderate adoption of enteric strategies by 2030. Divert 75% of organic waste from landfills by 2025. Oil and gas fugitive methane emissions reduced 50% by 2030 and further reductions as infrastructure components retire in line with reduced fossil gas demand.	**Not Applicable.** The proposed Project would not involve any production of non-combustion methane emissions or organic waste.
High Global Warming Potential (GWP) Emissions	
Low GWP refrigerants introduced as building electrification increases, mitigating hydrofluorocarbon (HFC) emissions.	**Consistent.** The proposed Project includes refrigeration and would be consistent with the 2022 Title 24 Section 6 Building Codes for 2022 and would be required to meet increasing standards set by the State. Therefore, the Project would be consistent with meeting current and future policies concerning the use of low GWP refrigerants.

Source: California's 2022 Climate Change Scoping Plan Table 2-1: Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors

4.5 Conclusion

The Project is consistent with the actions and measures of the City's General Plan and the CARB 2022 Scoping Plan and would not interfere with the policies and goals set within those plans. Additionally, the proposed Project's GHG emissions of 7,269 $MTCO_2e$ per year and a net increase in emissions of 5,484 $MTCO_2e$ per year are both below the SCAQMD significance threshold of 10,000 $MTCO_2e$ per year. Therefore, the Project would have a less-than-significant impact related to GHG emissions.

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APPENDIX A – DEMO CALCULATIONS

Massachusetts Riverside

Estimates of Demolition Debris

Building Demolition

Building	Height(ft)	Area (ft2)	Volume (ft3)	Demo Building Volume (cy)
1	20	93444	1868880	22842
2	25	6406	160150	1957
Total		99850	2029030	24799

Weight of the Building Demolition Debris (ton/cy): 0.5

Total Weight of Building Debris **12400** **tons**

Note 1: Total square footage of existing school buildings contained in the project description
Note 2: FEMA Debris Estimating Field Guide, FEMA 329. September 2010
Note 3: CalEEMod User Guide

Hardscape Demolition

Weight of Hardscape 145 lb/ft3

Area	Height (ft)	Area (ft2)	Volume (cf)	Weight (lbs)	Weight (tons)
1	0.5	344899.379	172450	25005205	12503
2	0	0	0	0	0
3	0	0	0	0	0
Total		**344899.379**	**172450**	**25005205**	**12503** **tons**

Total Demolition Weight **24902 tons**

5'5''	0.416667	5.42	
3.5		18.97	ft

Front Building:	54219	
Back ones	39225	
Tall Back	6406	
Existing Building	99850	SF
Existing Hardscape	344899.379	

10.21
7.92
2.29

APPENDIX B – FUEL CALCULATIONS

Model Output: OFFROAD2021 (v1.0.9) Emissions Inventory — Updated: 1.28.25
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2026 <- Construction Start Year
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2021 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

							gallons/year	hp-hr/years	
Region	Calendar Year	VehClass	MdlYr	HP_Bin	Fuel		Fuel Consumption	Horsepower Hours	Fuel Rate
Riverside (SC)	2026	Construction and Mining - Rubber Tired Dozers	Aggregate	Aggregate	Diesel		145195.8007	3092054.186	0.046957715
Riverside (SC)	2026	Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel		3921789.209	73313578.04	0.053493354
Riverside (SC)	2026	Construction and Mining - Graders	Aggregate	Aggregate	Diesel		590014.3749	11334466.21	0.052054888
Riverside (SC)	2026	Construction and Mining - Excavators	Aggregate	Aggregate	Diesel		3966491.274	77619473.32	0.051101755
Riverside (SC)	2026	Construction and Mining - Scrapers	Aggregate	Aggregate	Diesel		1510799.89	31609777.42	0.047795335
Riverside (SC)	2026	Industrial - Forklifts	Aggregate	Aggregate	Diesel		295688.1019	5530024.49	0.053469583
Riverside (SC)	2026	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Diesel		165003.2177	1822288.05	0.090547275
Riverside (SC)	2026	Construction and Mining - Cranes	Aggregate	Aggregate	Diesel		457832.6905	8435601.804	0.054273862
Riverside (SC)	2026	Light Commercial - Misc - Welders	Aggregate	Aggregate	Diesel		1.68E+05	4976556	0.033758286
Riverside (SC)	2026	Construction and Mining - Pavers	Aggregate	Aggregate	Diesel		256924.835	4975445.09	0.051638563
Riverside (SC)	2026	Construction and Mining - Paving Equipment	Aggregate	Aggregate	Diesel		284636.2109	5549237.545	0.05129285
Riverside (SC)	2026	Construction and Mining - Rollers	Aggregate	Aggregate	Diesel		691357.3788	12897415.4	0.053604335
Riverside (SC)	2026	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Diesel		3.13E+04	1.02E+06	0.030686275
Riverside (SC)	2026	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Diesel		1811.93	43241.55	0.041902522
Riverside (SC)	2026	Construction and Mining - Crawler Tractors	Aggregate	Aggregate	Diesel		1249738.473	24813191.05	0.050365891
Riverside (SC)	2026	Construction and Mining - Off-Highway Trucks	Aggregate	Aggregate	Diesel		1646158.204	33940558.14	0.048501212
Riverside (SC)	2026	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Diesel		90314.13107	1066354.8	0.08469426

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2027 2026 Construction start year
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Units: miles/day for CVM	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	Fuel Consumption	Fuel Rate
Riverside (SC)	2027	MHDT	Aggregate	Aggregate	Diesel	580928.627	64.04015234	9.07
Riverside (SC)	2027	HHDT	Aggregate	Aggregate	Diesel	2023648.424	318.6419902	6.35
Riverside (SC)	2027	LHDT1	Aggregate	Aggregate	Diesel	526713.4197	25.29557179	20.82
Riverside (SC)	2027	LHDT2	Aggregate	Aggregate	Diesel	241624.1987	13.88203265	17.41
						Average MGP From Vehicle Splits		8.007699695

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2027
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	Fuel Consumption	
Riverside (SC)	2027	LDA	Aggregate	Aggregate	Gasoline	20354484.89	646.3182298	31.49
Riverside (SC)	2027	LDT1	Aggregate	Aggregate	Gasoline	1456606.871	56.00411545	26.01
Riverside (SC)	2027	LDT2	Aggregate	Aggregate	Gasoline	9414153.484	360.272054	26.13
Riverside (SC)	2027	MCY	Aggregate	Aggregate	Gasoline	135933.3741	3.223711537	42.17

APPENDIX C – PROPOSED CALEEMOD OUTPUT SHEETS

24-113 Massachusetts Riverside Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	24-113 Massachusetts Riverside
Construction Start Date	1/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	33.98719479573735, -117.35639090186527
County	Riverside-South Coast
City	Riverside
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5400
EDFZ	11
Electric Utility	City of Riverside
Gas Utility	Southern California Gas
App Version	2022.1.1.30

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
General Heavy Industry	160	1000sqft	4.88	159,880	52,534	—	—	—

Parking Lot	261	Space	2.35	0.00	0.00	—	—	—
Other Asphalt Surfaces	2.07	Acre	2.07	0.00	0.00	—	—	—
User Defined Industrial	200	User Defined Unit	0.00	0.00	0.00	—	—	—
Refrigerated Warehouse-No Rail	40.0	1000sqft	0.92	39,970	0.00	—	—	—

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.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	1.53	12.1	20.4	0.03	1.80	0.73	4,848
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	54.7	44.9	32.2	0.18	24.1	5.40	25,739
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	5.32	12.8	15.2	0.04	2.93	1.02	4,991
Annual (Max)	—	—	—	—	—	—	—
Unmit.	0.97	2.33	2.78	0.01	0.53	0.19	826
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	150	55.0	—

Unmit.	No	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2026	1.53	12.1	20.4	0.03	1.80	0.73	4,848
Daily - Winter (Max)	—	—	—	—	—	—	—
2026	3.91	44.9	32.2	0.18	24.1	5.40	25,739
2027	54.7	11.6	18.6	0.03	1.76	0.68	4,709
Average Daily	—	—	—	—	—	—	—
2026	1.36	12.8	15.2	0.04	2.93	1.02	4,991
2027	5.32	0.52	0.85	< 0.005	0.05	0.03	141
Annual	—	—	—	—	—	—	—
2026	0.25	2.33	2.78	0.01	0.53	0.19	826
2027	0.97	0.09	0.16	< 0.005	0.01	< 0.005	23.3

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.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	11.3	51.1	233	0.33	17.2	5.09	45,947
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	9.70	52.3	218	0.32	17.1	5.08	45,239
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	9.65	44.7	172	0.32	16.9	4.91	43,735
Annual (Max)	—	—	—	—	—	—	—
Unmit.	1.76	8.16	31.3	0.06	3.08	0.90	7,241

Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	55.0	55.0	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	55.0	55.0	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Annual)	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	Yes

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	3.35	26.9	42.1	0.30	16.8	4.69	33,325
Area	6.24	0.07	8.69	< 0.005	0.02	0.01	35.9
Energy	0.12	2.13	1.79	0.01	0.16	0.16	5,560
Water	—	—	—	—	—	—	765
Waste	—	—	—	—	—	—	445
Refrig.	—	—	—	—	—	—	1,107
Off-Road	0.00	17.7	176	0.00	0.00	0.00	3,907
Stationary	1.56	4.37	3.98	0.01	0.23	0.23	802
Total	11.3	51.1	233	0.33	17.2	5.09	45,947
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	3.21	28.1	35.9	0.30	16.8	4.69	32,653
Area	4.81	—	—	—	—	—	—
Energy	0.12	2.13	1.79	0.01	0.16	0.16	5,560

Water	—	—	—	—	—	—	765
Waste	—	—	—	—	—	—	445
Refrig.	—	—	—	—	—	—	1,107
Off-Road	0.00	17.7	176	0.00	0.00	0.00	3,907
Stationary	1.56	4.37	3.98	0.01	0.23	0.23	802
Total	9.70	52.3	218	0.32	17.1	5.08	45,239
Average Daily	—	—	—	—	—	—	—
Mobile	3.20	28.5	37.0	0.30	16.6	4.66	32,776
Area	5.79	0.05	5.95	< 0.005	0.01	0.01	24.6
Energy	0.12	2.13	1.79	0.01	0.16	0.16	5,560
Water	—	—	—	—	—	—	765
Waste	—	—	—	—	—	—	445
Refrig.	—	—	—	—	—	—	1,107
Off-Road	0.00	12.6	126	0.00	0.00	0.00	2,783
Stationary	0.53	1.50	1.36	< 0.005	0.08	0.08	275
Total	9.65	44.7	172	0.32	16.9	4.91	43,735
Annual	—	—	—	—	—	—	—
Mobile	0.58	5.20	6.74	0.05	3.03	0.85	5,426
Area	1.06	0.01	1.09	< 0.005	< 0.005	< 0.005	4.07
Energy	0.02	0.39	0.33	< 0.005	0.03	0.03	921
Water	—	—	—	—	—	—	127
Waste	—	—	—	—	—	—	73.6
Refrig.	—	—	—	—	—	—	183
Off-Road	0.00	2.30	22.9	0.00	0.00	0.00	461
Stationary	0.10	0.27	0.25	< 0.005	0.01	0.01	45.5
Total	1.76	8.16	31.3	0.06	3.08	0.90	7,241

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	2.29	20.7	19.0	0.03	0.84	0.78	3,438
Demolition	—	—	—	—	17.1	2.58	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.13	1.04	< 0.005	0.05	0.04	188
Demolition	—	—	—	—	0.93	0.14	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.21	0.19	< 0.005	0.01	0.01	31.2
Demolition	—	—	—	—	0.17	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06	0.07	0.82	0.00	0.20	0.05	193
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.32	24.2	5.79	0.14	6.05	1.99	22,108
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.01	< 0.005	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.33	0.31	0.01	0.33	0.11	1,212
Annual	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	1.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.24	0.06	< 0.005	0.06	0.02	201

3.3. Site Preparation (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.83	34.6	31.0	0.05	1.77	1.62	5,551
Dust From Material Movement	—	—	—	—	5.66	2.69	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.95	0.85	< 0.005	0.05	0.04	152
Dust From Material Movement	—	—	—	—	0.16	0.07	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	0.16	< 0.005	0.01	0.01	25.2
Dust From Material Movement	—	—	—	—	0.03	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.07	0.08	0.95	0.00	0.23	0.05	225
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.01	1.20	0.21	0.01	0.34	0.11	1,234
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.01	< 0.005	6.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	0.01	< 0.005	33.8
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	5.60

3.5. Grading (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	3.39	30.0	28.7	0.06	1.38	1.27	6,738
Dust From Material Movement	—	—	—	—	2.67	0.98	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.46	2.36	0.01	0.11	0.10	554
Dust From Material Movement	—	—	—	—	0.22	0.08	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.45	0.43	< 0.005	0.02	0.02	91.7
Dust From Material Movement	—	—	—	—	0.04	0.01	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.08	0.09	1.09	0.00	0.26	0.06	257
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.93	0.70	0.02	0.73	0.24	2,677
Average Daily	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.02	< 0.005	21.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.24	0.06	< 0.005	0.06	0.02	220
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	< 0.005	< 0.005	3.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.01	< 0.005	0.01	< 0.005	36.5

3.7. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.16	10.7	14.1	0.03	0.41	0.38	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.16	10.7	14.1	0.03	0.41	0.38	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.63	5.81	7.65	0.01	0.22	0.20	1,436

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.06	1.40	< 0.005	0.04	0.04	238
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.36	0.33	6.03	0.00	1.10	0.26	1,175
Vendor	0.02	1.05	0.33	0.01	0.29	0.09	1,035
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.33	0.37	4.57	0.00	1.10	0.26	1,077
Vendor	0.02	1.10	0.34	0.01	0.29	0.09	1,033
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	0.18	0.22	2.60	0.00	0.59	0.14	594
Vendor	0.01	0.60	0.18	< 0.005	0.16	0.05	562
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	0.03	0.04	0.47	0.00	0.11	0.03	98.4
Vendor	< 0.005	0.11	0.03	< 0.005	0.03	0.01	93.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—

Off-Road Equipment	1.11	10.2	14.0	0.03	0.36	0.34	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	< 0.005	5.16
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.85
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.32	0.33	4.21	0.00	1.10	0.26	1,057
Vendor	0.02	1.06	0.33	0.01	0.29	0.09	1,013
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	2.10
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.98
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.35
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.33
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.94	9.95	0.01	0.30	0.27	1,516
Paving	0.58	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.38	0.55	< 0.005	0.02	0.02	83.1
Paving	0.03	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	< 0.005	13.8
Paving	0.01	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06	0.06	0.75	0.00	0.20	0.05	189
Vendor	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
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.01	< 0.005	10.5
Vendor	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
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	1.74
Vendor	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

3.13. Architectural Coating (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.11	1.50	< 0.005	0.03	0.02	179
Architectural Coatings	54.5	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	0.14	< 0.005	< 0.005	< 0.005	17.1
Architectural Coatings	5.22	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	< 0.005	2.84
Architectural Coatings	0.95	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06	0.07	0.84	0.00	0.22	0.05	211
Vendor	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
Average Daily	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.02	< 0.005	20.6
Vendor	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
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	< 0.005	< 0.005	3.40

Vendor	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

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	2.01	1.24	26.8	0.06	6.19	1.58	6,285
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.78	25.0	8.79	0.23	8.98	2.70	25,218
Refrigerated Warehouse-No Rail	0.56	0.66	6.44	0.02	1.58	0.41	1,823
Total	3.35	26.9	42.1	0.30	16.8	4.69	33,325
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	1.93	1.37	21.8	0.06	6.19	1.58	5,793
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.76	26.1	8.81	0.23	8.98	2.70	25,152
Refrigerated Warehouse-No Rail	0.53	0.71	5.28	0.02	1.58	0.41	1,708

Total	3.21	28.1	35.9	0.30	16.8	4.69	32,653
Annual	—	—	—	—	—	—	—
General Heavy Industry	0.35	0.26	4.14	0.01	1.12	0.29	972
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.14	4.80	1.60	0.04	1.63	0.49	4,169
Refrigerated Warehouse-No Rail	0.10	0.13	1.00	< 0.005	0.29	0.07	286
Total	0.58	5.20	6.74	0.05	3.03	0.85	5,426

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	1,849
Parking Lot	—	—	—	—	—	—	108
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	1,056
Total	—	—	—	—	—	—	3,013
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	1,849

Parking Lot	—	—	—	—	—	—	108
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	1,056
Total	—	—	—	—	—	—	3,013
Annual	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	306
Parking Lot	—	—	—	—	—	—	17.9
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	175
Total	—	—	—	—	—	—	499

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	0.10	1.84	1.55	0.01	0.14	0.14	2,207
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Refrigerated Warehouse-No Rail	0.02	0.28	0.24	< 0.005	0.02	0.02	340
Total	0.12	2.13	1.79	0.01	0.16	0.16	2,547
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	0.10	1.84	1.55	0.01	0.14	0.14	2,207
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0.02	0.28	0.24	< 0.005	0.02	0.02	340
Total	0.12	2.13	1.79	0.01	0.16	0.16	2,547
Annual	—	—	—	—	—	—	—
General Heavy Industry	0.02	0.34	0.28	< 0.005	0.03	0.03	365
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	< 0.005	0.05	0.04	< 0.005	< 0.005	< 0.005	56.3
Total	0.02	0.39	0.33	< 0.005	0.03	0.03	422

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Consumer Products	4.29	—	—	—	—	—	—
Architectural Coatings	0.52	—	—	—	—	—	—
Landscape Equipment	1.43	0.07	8.69	< 0.005	0.02	0.01	35.9
Total	6.24	0.07	8.69	< 0.005	0.02	0.01	35.9
Daily, Winter (Max)	—	—	—	—	—	—	—
Consumer Products	4.29	—	—	—	—	—	—
Architectural Coatings	0.52	—	—	—	—	—	—
Total	4.81	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Consumer Products	0.78	—	—	—	—	—	—
Architectural Coatings	0.10	—	—	—	—	—	—
Landscape Equipment	0.18	0.01	1.09	< 0.005	< 0.005	< 0.005	4.07
Total	1.06	0.01	1.09	< 0.005	< 0.005	< 0.005	4.07

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	613
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	152
Total	—	—	—	—	—	—	765

Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	613
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	152
Total	—	—	—	—	—	—	765
Annual	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	102
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	25.2
Total	—	—	—	—	—	—	127

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	374
Parking Lot	—	—	—	—	—	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	70.8
Total	—	—	—	—	—	—	445
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	374
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	70.8
Total	—	—	—	—	—	—	445
Annual	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	61.9
Parking Lot	—	—	—	—	—	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	11.7
Total	—	—	—	—	—	—	73.6

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	41.6
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	1,065
Total	—	—	—	—	—	—	1,107
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	41.6
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	1,065
Total	—	—	—	—	—	—	1,107
Annual	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	6.89
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	176
Total	—	—	—	—	—	—	183

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Forklifts	0.00	17.7	176	0.00	0.00	0.00	3,907
Total	0.00	17.7	176	0.00	0.00	0.00	3,907

Daily, Winter (Max)	—	—	—	—	—	—	—
Forklifts	0.00	17.7	176	0.00	0.00	0.00	3,907
Total	0.00	17.7	176	0.00	0.00	0.00	3,907
Annual	—	—	—	—	—	—	—
Forklifts	0.00	2.30	22.9	0.00	0.00	0.00	461
Total	0.00	2.30	22.9	0.00	0.00	0.00	461

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Fire Pump	0.78	2.18	1.99	< 0.005	0.11	0.11	401
Emergency Generator	0.78	2.18	1.99	< 0.005	0.11	0.11	401
Total	1.56	4.37	3.98	0.01	0.23	0.23	802
Daily, Winter (Max)	—	—	—	—	—	—	—
Fire Pump	0.78	2.18	1.99	< 0.005	0.11	0.11	401
Emergency Generator	0.78	2.18	1.99	< 0.005	0.11	0.11	401
Total	1.56	4.37	3.98	0.01	0.23	0.23	802
Annual	—	—	—	—	—	—	—
Fire Pump	0.02	0.05	0.05	< 0.005	< 0.005	< 0.005	9.09
Emergency Generator	0.08	0.22	0.20	< 0.005	0.01	0.01	36.4
Total	0.10	0.27	0.25	< 0.005	0.01	0.01	45.5

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2026	1/29/2026	5.00	20.0	—
Site Preparation	Site Preparation	1/30/2026	2/13/2026	5.00	10.0	—
Grading	Grading	2/14/2026	3/28/2026	5.00	30.0	—
Building Construction	Building Construction	3/29/2026	1/1/2027	5.00	200	—
Paving	Paving	1/4/2027	1/29/2027	5.00	20.0	—
Architectural Coating	Architectural Coating	2/1/2027	3/19/2027	5.00	35.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	0.00	8.00	84.0	0.37
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41

Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	0.00	8.00	84.0	0.37
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	311	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	6.30	56.0	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	37.7	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	83.9	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	32.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	16.8	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

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	299,775	99,925	11,552

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 (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	24,902	—
Site Preparation	—	500	35.0	0.00	—
Grading	9,043	—	120	0.00	—
Paving	0.00	0.00	0.00	0.00	4.42

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%
Parking Lot	2.35	100%
Other Asphalt Surfaces	2.07	100%
User Defined Industrial	0.00	0%
Refrigerated Warehouse-No Rail	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	449	0.03	< 0.005
2027	0.00	439	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
General Heavy Industry	505	505	505	184,406	8,860	8,860	8,860	3,233,938
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	342	342	342	124,736	9,778	9,778	9,778	3,568,847
Refrigerated Warehouse-No Rail	126	126	126	46,101	2,215	2,215	2,215	808,485

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	299,775	99,925	11,552

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)
General Heavy Industry	1,529,903	439	0.0330	0.0040	6,866,898
Parking Lot	89,673	439	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	439	0.0330	0.0040	0.00
User Defined Industrial	0.00	439	0.0330	0.0040	0.00
Refrigerated Warehouse-No Rail	874,126	439	0.0330	0.0040	1,057,648

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Heavy Industry	36,972,250	832,964
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
Refrigerated Warehouse-No Rail	9,243,063	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	198	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
User Defined Industrial	0.00	—
Refrigerated Warehouse-No Rail	37.6	—

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 Heavy Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Refrigerated Warehouse-No Rail	Cold storage	R-404A	3,922	7.50	7.50	7.50	25.0

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	CNG	Average	20.0	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
Fire Pump	Diesel	2.00	1.00	50.0	238	0.73
Emergency Generator	Diesel	2.00	1.00	200	238	0.73

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	26.3	annual days of extreme heat
Extreme Precipitation	2.65	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	1.71	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	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	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	97.0

AQ-PM	90.3
AQ-DPM	97.5
Drinking Water	77.4
Lead Risk Housing	95.3
Pesticides	3.83
Toxic Releases	56.0
Traffic	79.4
Effect Indicators	—
CleanUp Sites	83.2
Groundwater	82.4
Haz Waste Facilities/Generators	84.0
Impaired Water Bodies	0.00
Solid Waste	9.67
Sensitive Population	—
Asthma	69.6
Cardio-vascular	78.1
Low Birth Weights	96.0
Socioeconomic Factor Indicators	—
Education	93.6
Housing	74.0
Linguistic	83.1
Poverty	91.3
Unemployment	98.5

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	10.90722443
Employed	14.1537277
Median HI	15.37277044
Education	—
Bachelor's or higher	0.179648402
High school enrollment	20.74939048
Preschool enrollment	5.62042859
Transportation	—
Auto Access	16.36083665
Active commuting	75.55498524
Social	—
2-parent households	53.0347748
Voting	0.282304632
Neighborhood	—
Alcohol availability	13.07583729
Park access	49.63428718
Retail density	69.44693956
Supermarket access	57.08969588
Tree canopy	18.51661748
Housing	—
Homeownership	28.76940844
Housing habitability	29.78313871
Low-inc homeowner severe housing cost burden	99.12742205
Low-inc renter severe housing cost burden	48.36391634
Uncrowded housing	8.982420121
Health Outcomes	—
Insured adults	7.712049275
Arthritis	40.2

Asthma ER Admissions	29.2
High Blood Pressure	34.2
Cancer (excluding skin)	87.6
Asthma	7.7
Coronary Heart Disease	25.9
Chronic Obstructive Pulmonary Disease	16.6
Diagnosed Diabetes	13.8
Life Expectancy at Birth	33.8
Cognitively Disabled	38.1
Physically Disabled	67.1
Heart Attack ER Admissions	36.0
Mental Health Not Good	5.6
Chronic Kidney Disease	10.6
Obesity	4.4
Pedestrian Injuries	97.3
Physical Health Not Good	6.6
Stroke	22.5
Health Risk Behaviors	—
Binge Drinking	63.5
Current Smoker	6.0
No Leisure Time for Physical Activity	4.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	64.0
Elderly	93.3
English Speaking	18.4
Foreign-born	81.3

Outdoor Workers	7.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	51.6
Traffic Density	83.8
Traffic Access	68.6
Other Indices	—
Hardship	94.9
Other Decision Support	—
2016 Voting	3.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	99.0
Healthy Places Index Score for Project Location (b)	4.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Adjusted lot acreage to match site plan provided by client.
Construction: Off-Road Equipment	Assumed all construction will be utilized 8 hours per work day. Replaced Tractors/Loaders/Backhoes with Crawler Tractors in the Site Preparation and Grading Phases.
Operations: Vehicle Data	Adjusted trip rate to match ITE 11th edition trip rate for General Light Industrial auto and Warehouse trips. Truck trips were applied to the User Defined Industrial land use, with 2 axle trucks applied to Non Res H-W (15.3 mi length and 34.5029 percentage), 3 axle trucks applied to Non Res W-O (14.2 mi and 11.1111%), and 4+ axle trucks applied to Non Res O-O (40 mi and 54.3860%).
Operations: Fleet Mix	Updated vehicle splits to match the operational trip generation
Construction: Construction Phases	Extended architectural coating phase due to size of building facade. Building construction phase shortened to adhere to ~14 month construction schedule provided by client
Operations: Off-Road Equipment	Forklifts were changed from diesel to CNG.
Operations: Emergency Generators and Fire Pumps	Adjusted
Construction: Trips and VMT	Increased default trip length of 20.0 miles to 56 miles for hauling trip length during the site preparation phase to represent the distance to the Soil Safe landfill for contaminated soil in Adelanto, approximately 56 miles from the Project site (by roadway).

APPENDIX D – EXISTING CALEEMOD OUTPUT SHEETS

23-105 Massachusetts Existing Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-105 Massachusetts Existing
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	33.98719479573735, -117.35639090186527
County	Riverside-South Coast
City	Riverside
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5400
EDFZ	11
Electric Utility	City of Riverside
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	99.8	1000sqft	2.29	99,850	0.00	—	—	—

Other Asphalt Surfaces	7.92	Acre	7.92	0.00	0.00	—	—	—
User Defined Industrial	99.8	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

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.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	5.10	4.39	30.4	0.08	6.46	1.75	11,167
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	4.31	4.57	21.5	0.08	6.45	1.74	10,696
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	4.79	4.66	25.2	0.08	6.40	1.73	10,780
Annual (Max)	—	—	—	—	—	—	—
Unmit.	0.87	0.85	4.61	0.01	1.17	0.32	1,785
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	55.0	55.0	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	55.0	55.0	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Annual)	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	3,000

Unmit.	—	—	—	—	—	—	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	1.88	3.20	25.1	0.08	6.36	1.66	7,977
Area	3.16	0.04	4.34	< 0.005	0.01	0.01	17.9
Energy	0.06	1.15	0.97	0.01	0.09	0.09	2,533
Water	—	—	—	—	—	—	380
Waste	—	—	—	—	—	—	233
Refrig.	—	—	—	—	—	—	26.0
Total	5.10	4.39	30.4	0.08	6.46	1.75	11,167
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	1.81	3.42	20.5	0.07	6.36	1.66	7,524
Area	2.44	—	—	—	—	—	—
Energy	0.06	1.15	0.97	0.01	0.09	0.09	2,533
Water	—	—	—	—	—	—	380
Waste	—	—	—	—	—	—	233
Refrig.	—	—	—	—	—	—	26.0
Total	4.31	4.57	21.5	0.08	6.45	1.74	10,696
Average Daily	—	—	—	—	—	—	—
Mobile	1.79	3.48	21.3	0.07	6.31	1.64	7,596
Area	2.93	0.03	2.97	< 0.005	0.01	< 0.005	12.3
Energy	0.06	1.15	0.97	0.01	0.09	0.09	2,533
Water	—	—	—	—	—	—	380
Waste	—	—	—	—	—	—	233
Refrig.	—	—	—	—	—	—	26.0

Total	4.79	4.66	25.2	0.08	6.40	1.73	10,780
Annual	—	—	—	—	—	—	—
Mobile	0.33	0.64	3.89	0.01	1.15	0.30	1,258
Area	0.54	< 0.005	0.54	< 0.005	< 0.005	< 0.005	2.03
Energy	0.01	0.21	0.18	< 0.005	0.02	0.02	419
Water	—	—	—	—	—	—	62.9
Waste	—	—	—	—	—	—	38.7
Refrig.	—	—	—	—	—	—	4.30
Total	0.87	0.85	4.61	0.01	1.17	0.32	1,785

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	1.84	1.13	24.5	0.06	5.66	1.44	5,738
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.05	2.08	0.57	0.02	0.71	0.21	2,239
Total	1.88	3.20	25.1	0.08	6.36	1.66	7,977
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	1.76	1.25	19.9	0.05	5.66	1.44	5,290
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Industrial	0.04	2.17	0.57	0.02	0.71	0.21	2,234
Total	1.81	3.42	20.5	0.07	6.36	1.66	7,524
Annual	—	—	—	—	—	—	—
General Heavy Industry	0.32	0.24	3.78	0.01	1.02	0.26	887
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.01	0.40	0.10	< 0.005	0.13	0.04	370
Total	0.33	0.64	3.89	0.01	1.15	0.30	1,258

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	1,155
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	1,155
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	1,155
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	1,155
Annual	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	191
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	191

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	0.06	1.15	0.97	0.01	0.09	0.09	1,378
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.06	1.15	0.97	0.01	0.09	0.09	1,378
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	0.06	1.15	0.97	0.01	0.09	0.09	1,378
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.06	1.15	0.97	0.01	0.09	0.09	1,378
Annual	—	—	—	—	—	—	—
General Heavy Industry	0.01	0.21	0.18	< 0.005	0.02	0.02	228

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.21	0.18	< 0.005	0.02	0.02	228

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Consumer Products	2.16	—	—	—	—	—	—
Architectural Coatings	0.28	—	—	—	—	—	—
Landscape Equipment	0.71	0.04	4.34	< 0.005	0.01	0.01	17.9
Total	3.16	0.04	4.34	< 0.005	0.01	0.01	17.9
Daily, Winter (Max)	—	—	—	—	—	—	—
Consumer Products	2.16	—	—	—	—	—	—
Architectural Coatings	0.28	—	—	—	—	—	—
Total	2.44	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Consumer Products	0.39	—	—	—	—	—	—
Architectural Coatings	0.05	—	—	—	—	—	—
Landscape Equipment	0.09	< 0.005	0.54	< 0.005	< 0.005	< 0.005	2.03
Total	0.54	< 0.005	0.54	< 0.005	< 0.005	< 0.005	2.03

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	380
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	380
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	380
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	380
Annual	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	62.9
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	62.9

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	233
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	233
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	233
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	233
Annual	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	38.7
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
User Defined Industrial	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	38.7

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

General Heavy Industry	—	—	—	—	—	—	26.0
Total	—	—	—	—	—	—	26.0
Daily, Winter (Max)	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	26.0
Total	—	—	—	—	—	—	26.0
Annual	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	4.30
Total	—	—	—	—	—	—	4.30

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10T	PM2.5T	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	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

5. Activity Data

5.9. 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
General Heavy Industry	461	461	461	168,377	8,090	8,090	8,090	2,952,844
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	25.0	25.0	25.0	9,111	771	771	771	281,430

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	149,775	49,925	20,700

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)
General Heavy Industry	955,472	439	0.0330	0.0040	4,288,590
Other Asphalt Surfaces	0.00	439	0.0330	0.0040	0.00
User Defined Industrial	0.00	439	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)
General Heavy Industry	23,090,313	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	124	—
Other Asphalt Surfaces	0.00	—
User Defined Industrial	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 Heavy Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	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

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	26.3	annual days of extreme heat
Extreme Precipitation	2.65	annual days with precipitation above 20 mm

Sea Level Rise	—	meters of inundation depth
Wildfire	1.71	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	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	3	1	1	3

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	97.0
AQ-PM	90.3
AQ-DPM	97.5
Drinking Water	77.4
Lead Risk Housing	95.3
Pesticides	3.83
Toxic Releases	56.0
Traffic	79.4
Effect Indicators	—

CleanUp Sites	83.2
Groundwater	82.4
Haz Waste Facilities/Generators	84.0
Impaired Water Bodies	0.00
Solid Waste	9.67
Sensitive Population	—
Asthma	69.6
Cardio-vascular	78.1
Low Birth Weights	96.0
Socioeconomic Factor Indicators	—
Education	93.6
Housing	74.0
Linguistic	83.1
Poverty	91.3
Unemployment	98.5

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	10.90722443
Employed	14.1537277
Median HI	15.37277044
Education	—
Bachelor's or higher	0.179648402
High school enrollment	20.74939048
Preschool enrollment	5.62042859
Transportation	—

Auto Access	16.36083665
Active commuting	75.55498524
Social	—
2-parent households	53.0347748
Voting	0.282304632
Neighborhood	—
Alcohol availability	13.07583729
Park access	49.63428718
Retail density	69.44693956
Supermarket access	57.08969588
Tree canopy	18.51661748
Housing	—
Homeownership	28.76940844
Housing habitability	29.78313871
Low-inc homeowner severe housing cost burden	99.12742205
Low-inc renter severe housing cost burden	48.36391634
Uncrowded housing	8.982420121
Health Outcomes	—
Insured adults	7.712049275
Arthritis	40.2
Asthma ER Admissions	29.2
High Blood Pressure	34.2
Cancer (excluding skin)	87.6
Asthma	7.7
Coronary Heart Disease	25.9
Chronic Obstructive Pulmonary Disease	16.6
Diagnosed Diabetes	13.8
Life Expectancy at Birth	33.8

Cognitively Disabled	38.1
Physically Disabled	67.1
Heart Attack ER Admissions	36.0
Mental Health Not Good	5.6
Chronic Kidney Disease	10.6
Obesity	4.4
Pedestrian Injuries	97.3
Physical Health Not Good	6.6
Stroke	22.5
Health Risk Behaviors	—
Binge Drinking	63.5
Current Smoker	6.0
No Leisure Time for Physical Activity	4.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	64.0
Elderly	93.3
English Speaking	18.4
Foreign-born	81.3
Outdoor Workers	7.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	51.6
Traffic Density	83.8
Traffic Access	68.6
Other Indices	—
Hardship	94.9
Other Decision Support	—

2016 Voting	3.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	99.0
Healthy Places Index Score for Project Location (b)	4.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Adjusted lot acreage to match site plan provided by client.
Construction: Off-Road Equipment	Assumed all construction will be utilized 8 hours per work day. Replaced Tractors/Loaders/Backhoes with Crawler Tractors in the Site Preparation and Grading Phases.
Operations: Vehicle Data	Adjusted trip rate to match ITE 11th edition trip rate for General Light Industrial auto trips. Truck trips were applied to the User Defined Industrial land use, with 2 axle trucks applied to Non Res H-W (length and 16percentage), 3 axle trucks applied to Non Res W-O 20%, and 4+ axle trucks applied to Non Res O-O 64%.
Operations: Fleet Mix	Updated vehicle splits to match the existing use operational trip generation

Construction: Construction Phases	Extended architectural coating phase due to size of building facade.