



An Employee-Owned Company

October 23, 2025

Mr. Kerry Garza
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9815 Mira Mesa Boulevard
San Diego, CA 92131

Reference: Air Quality Analysis for the Pasqual Heights Project (PDS2024-TM-5657; RECON Number 10597)
(PDS2025-DB-25-00)

Dear Mr. Garza:

The purpose of this report is to assess potential air quality impacts from construction and operation of the Pasqual Heights Project (project). This analysis was prepared in accordance with the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality (County Air Quality Guidelines) (County of San Diego 2007).

1.0 Project Description

The project site is located at 830 Idaho Avenue within unincorporated San Diego County (assessor parcel number 234-160-25). The 10.39-acre project site is largely undeveloped with the exception of a single-family residence. The project site is bordered by San Pasqual Valley Road to the northeast and Idaho Avenue to the southeast. The project site is surrounded by single-family residential uses to the north, south, and west, a church to the southeast, and a garden center to the east. The project site and surrounding properties are designated as Village Residential (VR-2) in the County's General Plan and are zoned A70 (Limited Agricultural). Figure 1 shows the regional location of the project. Figure 2 shows an aerial photograph of the project site and vicinity.

The project proposes the demolition of the existing single-family residence and construction of 42 single-family residential lots on the 10.39-acre site. Figure 3 shows the proposed site plan. The project would not require a zone change or general plan amendment (GPA). The current land use designation of Village Residential (VR-2) allows two dwelling units per acre for a total of 21 lots. The project would utilize the Density Bonus Law as updated by Assembly Bill (AB) 1287 to increase the density to 42 lots by reserving 29 percent (7 lots) of the base density units for Very Low and Moderate Income Households, as follows: 15 percent of the base density (4 lots) reserved for Very Low Income Households plus an additional 14 percent of the base density (3 lots) reserved for Moderate Income Households. The project would also include a sewer lift station and a bio-filtration basin in the southeast portion of the project site and a water-pressure-reducing station in the eastern portion of the project site. Project construction is anticipated to begin in August 2026 and last for approximately two years. Grading would include 74,791 cubic yards of cut and 74,893 cubic yards of fill for a total soil import quantity of 102 cubic yards.

2.0 Environmental Setting

2.1 Existing Setting

The project is located in San Diego County, within the San Diego Air Basin (SDAB) and approximately 15 miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas. The 10.39-acre project site is subject to the General Plan Regional Category Village, Land Use Designation Village Residential (VR-2).

Zoning for the site is A70 (Limited Agricultural). The surrounding properties are also zoned A70 (Limited Agricultural). The nearest sensitive receptors are the single-family residential uses located as close as 30 feet from the project boundary.

2.2 Climate and Meteorology

The project area, like the rest of San Diego County, has a Mediterranean climate characterized by warm, dry summers and mild winters. The annual high and low temperatures for the project site are 76 and 54 degrees Fahrenheit (°F), respectively. The average annual precipitation is 14 inches, falling primarily from November to April (U.S. Climate Data 2021).

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

Fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone creates a temperature inversion layer (a layer in the atmosphere in which temperature increases with height) that acts as a lid to the vertical dispersion of air pollutants in the SDAB. Beneath the inversion layer pollutants become “trapped” as their ability to disperse diminishes. Sunlight reacts with air pollutants (reactive organic gas [ROG] and nitrogen oxides [NO_x] to create ozone (O₃). Thus, poorly dispersed pollutants along with strong sunlight results in the creation of ozone at this surface layer.

The prevailing wind pattern in the western portion of the SDAB includes a daytime onshore flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze), which leads to pollutants being blown out to sea at night and returning to land the following day. The prevailing westerly wind pattern is sometimes interrupted by regional “Santa Ana” conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada-Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea.

Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California, Mexico, draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants results in air quality conditions worse than normal (California Air Resources Board [CARB] 1997).

2.3 Regulatory Setting

2.3.1 Federal Regulations

Ambient Air Quality Standards (AAQS) represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 (42 U.S. Code [U.S.C.] 7401) for the purposes of protecting and enhancing the quality of the nation’s air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 U.S.C. 7409], the U.S. Environmental Protection Agency (U.S. EPA) developed primary and secondary National AAQS (NAAQS).

Six pollutants of primary concern were designated: ozone, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), lead (Pb), and particulate matter (PM₁₀ and PM_{2.5}). The primary NAAQS “in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health . . .” and the secondary standards “. . . protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air” [42 U.S.C. 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (CARB 2024).

If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as non-attainment area for that pollutant. The SDAB is currently classified as a federal non-attainment (severe-15) area for ozone. The SDAB attainment designations are summarized in Table 2.

2.3.2 State Regulations

Criteria Pollutants

The CARB has developed the California AAQS (CAAQS) and generally has set more stringent limits on the criteria pollutants than the NAAQS (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Similar to the federal CAA, the state classifies either “attainment” or “non-attainment” areas for each pollutant based on the comparison of measured data with the CAAQS. The SDAB is a non-attainment area for the state ozone standards, the state PM₁₀ standard, and the state PM_{2.5} standard (see Table 2). The California CAA, which became effective on January 1, 1989, requires all areas of the state to attain the CAAQS at the earliest practicable date. The California CAA has specific air quality management strategies that must be adopted by the agency responsible for the non-attainment area. In the case of the SDAB, the responsible agency is the San Diego Air Pollution Control District (SDAPCD).

Toxic Air Contaminants

The public’s exposure to toxic air contaminants (TACs) is a significant public health issue in California. Diesel particulate matter (DPM) emissions have been identified as TACs. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The California Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics “Hot Spots” Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air.

The goals of the Air Toxics “Hot Spots” Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

Table 1 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 ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) 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 (PM _{2.5}) ⁹	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	9 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m ³)	–	Non-dispersive Infrared Photometry
	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 Chemi- luminescence	100 ppb (188 µg/m ³)	–	Gas Phase Chemi- luminescence
	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 Fluorescence; Spectro- photometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1,300 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	--	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chroma- tography			
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 Chroma- tography			

Table 1
Ambient Air Quality Standards

NOTES:

ppm = parts per million; ppb = parts per billion; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; – = not applicable.

- ¹ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10} , $\text{PM}_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- ² National standards (other than 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 PM_{10} , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For $\text{PM}_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. 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 Air Resources Board 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 February 7, 2024, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $12.0 \mu\text{g}/\text{m}^3$ to $9.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standards of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ 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 standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards 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 CARB 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 ($1.5 \mu\text{g}/\text{m}^3$ 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.

SOURCE: CARB 2024.

Table 2 San Diego Air Basin Attainment Designations		
Criteria Pollutant	Federal Designation	State Designation
Ozone (8-hour)	Non-attainment – Severe 15	Non-attainment
Ozone (1-hour)	Serious – Maintenance ¹	Non-attainment
Carbon Monoxide	Moderate – Maintenance	Attainment
PM ₁₀	Unclassifiable ²	Non-attainment
PM _{2.5}	Attainment	Non-attainment ³
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Unclassified

SOURCE: SDAPCD 2023, U.S. EPA 2023

¹The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.

²At the time of designation, if the available data does not support a designation of attainment or non-attainment, the area is designated as unclassifiable.

³CARB has not reclassified the region to attainment yet due to (1) incomplete data, and (2) the use of non-California Approved Samplers (CAS). While data collected does meet the requirements for designation of attainment with federal PM_{2.5} standards, the data completeness requirements for state PM_{2.5} standards substantially exceed federal requirements and mandates, and have historically not been feasible for most air districts to adhere to given local resources. SDAPCD has begun replacing most regional filter-based PM_{2.5} monitors as they reach the end of their useful life with continuous PM_{2.5} air monitors to ensure collected data meets stringent completeness requirements in the future. SDAPCD anticipates these new monitors will be approved as "CAS" monitors once CARB review the list of approved monitors, which has not been updated since 2013.

The Children’s Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children’s exposure to air pollutants. The act requires CARB to review its air quality standards from a children’s health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children’s health. Locally, toxic air pollutants are regulated through the SDAPCD Regulation XII. Of particular concern statewide are DPM emissions. DPM was established as a TAC in 1998, and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). Diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB and are listed as carcinogens either under the state’s Proposition 65 or under the federal Hazardous Air Pollutants program.

Following the identification of DPM as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB 2000). To monitor the effectiveness of the efforts to reduce DPM, CARB has supported field campaigns that measure real-world emissions from heavy-duty vehicles, and results indicate that regulations aimed at reducing emissions of DPM have been successful.

As an ongoing process, CARB will continue to establish new programs and regulations for the control of DPM and other air-toxics emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public’s exposure to DPM and other TACs will continue to decline.

State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as air quality management plans, monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SIP plans for San Diego County specifically include the Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County (2012), the 2004 Revision to the California State Implementation Plan for Carbon Monoxide–Updated Maintenance Plan for Ten Federal Planning Areas, and the 2020 Plan for Attaining the National Ambient Air Quality Standard for Ozone in San Diego County.

The California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP).

2.3.3 San Diego Air Pollution Control District

2.3.3.1 Regional Air Quality Strategy

The SDAPCD prepared the original 1991/1992 Regional Air Quality Strategy (RAQS) in response to requirements set forth in the California CAA. The California CAA requires areas that are designated state non-attainment areas for ozone, CO, SO₂, and NO₂ prepare and implement plans to attain the standards by the earliest practicable date. The California CAA does not provide guidance on timing or requirements for attaining the state PM₁₀ and PM_{2.5} standards. Attached as part of the RAQS are the Transportation Control Measures (TCMs) adopted by the San Diego Association of Governments (SANDAG). Updates of the RAQS and corresponding TCM are required every three years. The RAQS and TCM set forth the steps needed to accomplish attainment of NAAQS and CAAQS. The most recent update of the RAQS and TCM occurred in 2022.

2.3.3.2 Rules and Regulations

The SDAPCD is responsible for adopting and enforcing rules and regulations for sources of air pollution in the SDAB. The following rules and regulations are applicable to the project:

- **SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions.** Prohibits discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart.

- **SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance.** Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property.
- **SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust.** Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site.
- **SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings.** Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce volatile organic compounds (VOC) emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **SDAPCD Regulation XII: Toxic Air Contaminates; Rule 1200: Toxic Air Contaminants – New Source Review.** Requires new or modified stationary source units with the potential to emit TACs above rule threshold levels to either demonstrate that they will not increase the maximum incremental cancer risk above 1 in 1 million at every receptor location, or demonstrate that toxics best available control technology (T-BACT) will be employed if maximum incremental cancer risk is equal to or less than 10 in 1 million, or demonstrate compliance with SDAPCD’s protocol for those sources with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in 1 million but less than 100 in 1 million.
- **SDAPCD Regulation XII: Toxic Air Contaminates; Rule 1210: Toxic Air Contaminant Public Health Risks – Public Notification and Risk Reduction.** Requires each stationary source that is required to prepare a public risk assessment to provide written public notice of risks at or above the following levels: maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute non-cancer health hazard index equal to or greater than 1.0, or total chronic non-cancer health hazard index equal to or greater than 1.0.

2.4 Background Air Quality

Air quality at a particular location is a function of the kinds, amounts, and dispersal rates of pollutants being emitted into the air locally and throughout the basin. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography.

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the U.S. EPA. The SDAPCD maintains 11 air quality monitoring stations located throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The San Diego – Rancho Carmel Drive monitoring station located at 11403 Rancho Carmel Drive, approximately 9 miles south of the project site, is the closest station to the project site. The San Diego – Rancho Carmel Drive monitoring station measures NO_x and PM_{2.5}. The closest station that measures a wider range of pollutants is the San Diego – Kearny Villa Road monitoring station located at, approximately 18 miles south of the project site. The San Diego – Kearny Villa Road monitoring station measures ozone, NO_x, and PM_{2.5}. Table 3 provides a summary of the measurements collected at the San Diego – Rancho Carmel Drive and San Diego – Kearny Villa Road monitoring stations for the years 2021 through 2023.

Table 3 Summary of Air Quality Measurements Recorded at the San Diego – Rancho Carmel Drive and Kearny Villa Road Air Quality Monitoring Stations			
Pollutant/Standard	2021	2022	2023
San Diego – Rancho Carmel Drive Monitoring Station			
Nitrogen Dioxide			
Max 1-hr (ppm)	0.054	0.056	0.053
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0
Annual Average (ppm)	0.013	0.015	0.013
PM _{2.5} *			
Federal Max. Daily (µg/m ³)	23.5	14.9	23.2
Measured Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0	0	0
Calculated Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0.0	0.0	0.0
Federal Annual Average (µg/m ³)	8.5	7.6	6.9
State Max. Daily (µg/m ³)	--	--	--
State Annual Average (µg/m ³)	--	--	--
San Diego – Kearny Villa Road Monitoring Station			
Ozone			
Federal Max 8-hr (ppm)	0.071	0.083	0.079
Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm)	1	2	3
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	0	1	1
State Max 8-hr (ppm)	0.072	0.083	0.080
Days State 8-hour Standard Exceeded (0.07 ppm)	2	2	3
Max. 1-hr (ppm)	0.095	0.095	0.091
Days State 1-hour Standard Exceeded (0.09 ppm)	1	1	0
Nitrogen Dioxide			
Max 1-hr (ppm)	0.0600	0.0512	0.0384
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0
Annual Average (ppm)	0.007	0.008	0.006
PM _{2.5} *			
Federal Max. Daily (µg/m ³)	20.9	13.9	24.5
Measured Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0	0	0
Calculated Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0.0	0.0	0.0
Federal Annual Average (µg/m ³)	7.6	6.8	7.0
State Max. Daily (µg/m ³)	--	--	--
State Annual Average (µg/m ³)	--	--	--
SOURCE: CARB 2025. ppm = parts per million; µg/m ³ = micrograms per cubic meter; -- = Not available. * Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.			

The following is a discussion of the criteria pollutants along with the associated health risks. As discussed later in Section 3.1, the County has adopted screening level thresholds (SLTs) that align with attainment of the NAAQS. The NAAQS were developed to protect the public health, specifically the health of sensitive populations, including people with asthma, children, and the elderly. Thus, project emissions that are less than the SLTs would have a less than significant impact on public health.

2.4.1 Ozone

Oxides of nitrogen (NO_x) and hydrocarbons (ROG) are known as the chief “precursors” of ozone. These compounds react in the presence of sunlight to produce ozone, which is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution—or smog—is mainly a concern during the daytime in summer months. The SDAB is currently designated a federal and state non-attainment area for ozone. During the past two decades, San Diego had experienced a decline in ozone levels due to emission control efforts, despite the region’s growth in population and vehicle miles traveled (SDAPCD 2016).

About half of smog-forming emissions come from automobiles. Population growth in San Diego has resulted in a large increase in the number of automobiles expelling ozone-forming pollutants while operating on area roadways. In addition, the occasional transport of smog-filled air from the South Coast Air Basin only adds to the SDAB’s ozone problem. Stricter automobile emission controls, including more efficient automobile engines, have played a large role in why ozone levels have steadily decreased.

The adverse health effects associated with exposure to ozone pertain primarily to the respiratory system. Scientific evidence indicates that ambient levels of ozone affect not only sensitive receptors, such as asthma sufferers and children, but healthy adults as well. Exposure to ozone has been found to significantly alter lung functions by increasing respiratory rates and pulmonary resistance, decreasing tidal volumes (the amount of air inhaled and exhaled), and impairing respiratory mechanics. Symptomatic responses include throat dryness, chest tightness, headache, and nausea.

2.4.2 Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for CO. Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout the county. No violations of the state or federal CO standards have occurred since 2003.

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as “CO hot spots” and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO.

Adverse health effects associated with high concentrations of CO include the reduction of the oxygen-carrying capacity of the blood, which can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases. Very high levels of CO can be fatal.

2.4.3 Nitrogen Dioxide

Nitrogen dioxide is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. The national and state standards for NO₂ are being met in the SDAB. Inhalation is the most common route of exposure to NO₂. Because NO₂ has relatively low solubility in water, the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute

symptoms, including coughing, difficulty with breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4 to 12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat.

2.4.4 Sulfur Dioxide

Sulfur dioxide is a combustion product, with the primary source being power plants and heavy industries that use coal or oil as fuel. SO_2 is also a product of diesel engine combustion. The national and state standards for SO_2 are being met in the SDAB. The health effects of SO_2 include lung disease and breathing problems for people with asthma. SO_2 in the atmosphere contributes to the formation of acid rain.

2.4.5 Particulate Matter

Particulate matter (PM) is a complex mixture of microscopic solid or liquid particles including chemicals, soot, and dust. Anthropogenic sources of direct particulate emissions include crushing or grinding operations, dust stirred up by vehicle traffic, and combustion sources such as motor vehicles, power plants, wood burning, forest fires, agricultural burning, and industrial processes. Additionally, indirect emissions may be formed when aerosols react with compounds found in the atmosphere.

Health studies have shown a significant association between exposure to particulate matter and premature death in people with heart or lung diseases. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat (U.S. EPA 2024).

As its properties vary based on the size of suspended particles, particulate matter is generally categorized as PM_{10} or $\text{PM}_{2.5}$.

PM_{10} , occasionally referred to as "inhalable coarse particles" has an aerodynamic diameter of about one-seventh of the diameter of a human hair. High concentrations of PM_{10} are often found near roadways, construction, mining, or agricultural operations.

$\text{PM}_{2.5}$, occasionally referred to as "inhalable fine particles" has an aerodynamic diameter of about one-thirtieth of the diameter of a human hair. $\text{PM}_{2.5}$ is the main cause of haze in many parts of the U.S. Federal standards applicable to $\text{PM}_{2.5}$ were first adopted in 1997.

2.4.6 Lead

Lead is a metal found naturally in the environment as well as in manufactured products. At high levels of exposure, lead can have detrimental effects on the central nervous system. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase out of leaded gasoline, metal processing is currently the primary source of lead emissions. The previous standard for lead are being met in the SDAB.

2.4.7 Other Criteria Pollutants

The SDAB is in attainment of the state standards for vinyl chloride, hydrogen sulfides, sulfates, and visibility-reducing particulates.

3.0 Significance Criteria and Analysis Methodologies

3.1 County of San Diego Significance Thresholds

The guidelines below are based on the County Guidelines for Determining Significance, Air Quality (March 19, 2007) guidelines and CEQA Guidelines Appendix G. A project will have a significant adverse environmental impact related to air quality if it would:

1. Conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is non-attainment under an applicable NAAQS or CAAQS (PM₁₀, PM_{2.5}, or exceed quantitative thresholds for ozone precursors: NO_x and ROG; Table 4).
3. Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, day-care centers and project residents and employees) to substantial pollutant concentrations.
 - a. Place sensitive receptors near CO hot spots or creates CO hot spots near sensitive receptors.
 - b. Result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without application of best available control technology for toxics or a health hazard index greater than one would be deemed as having a potentially significant impact.
4. Expose considerable number of persons to objectionable odors.

The SDAPCD does not provide quantitative thresholds for determining the significance of construction or mobile source-related impacts. However, the district does specify Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources (SDAPCD Rules 20.1, 20.2, and 20.3). The County's Guidelines for Determining Significance, Air Quality allow the use of the SDAPCD AQIA as CEQA significance thresholds. The County's screening level thresholds (SLTs), which are based on SDAPCD Rules 20.1, 20.2, and 20.3, are shown in Table 4. The SLTs were adopted from the SDAPCD AQIA trigger level thresholds to align with attainment of the NAAQS and be protective of public health. Thus, air quality emissions below the SLTs would meet the NAAQS. The NAAQS were developed to protect public health, specifically the health of sensitive populations, including people with asthma, children, and the elderly. There is no level specified for ROG in the SDAPCD AQIA criteria. The County's threshold is based on the volatile organic compounds threshold of significance from the South Coast Air Quality Management District. Note that the terms ROG and VOC are considered interchangeable.

Table 4 County of San Diego Screening Level Thresholds			
Pollutant	Emission Rate		
	Pounds/Hour	Pounds/Day	Tons/Year
Respirable Particulate Matter (PM ₁₀)	--	100	15
Fine Particulate Matter (PM _{2.5})	--	55 ^a	10 ^a
Oxides of Nitrogen (NO _x)	25	250	40
Oxides of Sulfur (SO _x)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	--	3.2	0.6
Volatile Organic Compounds (VOCs)	--	75 ^b	13.7 ^c

SOURCE: SDAPCD, Rules 20.1, 20.2, 20.3; County of San Diego 2007.
^a Based on the U.S. EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005. Also used by the South Coast Air Quality Management District.
^b Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley.
^c 13.7 tons per year threshold based on 75 pounds per day multiplied by 365 days per year and divided by 2,000 pounds per ton.

3.2 Analysis Methodologies

Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional or local. In the case of this project, operational impacts are primarily due to emissions from mobile sources associated with vehicular travel along the roadways within the project area.

Construction and operation air emissions were calculated using the California Emissions Estimator Model (CalEEMod) 2022.1 (California Air Pollution Control Officers Association 2022). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. The model estimates mass emissions from two basic sources: construction sources and operational sources (i.e., area, energy, and mobile sources).

Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (i.e., percentage of autos, medium truck, etc.), trip destination (i.e., percent of trips from home to work, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters. The CalEEMod output files contained in Attachment 1 indicate the specific outputs for each model run. Emissions of NO_x, CO, SO_x, PM₁₀, PM_{2.5}, and ROG are calculated. Emission factors are not available for lead, and consequently, lead emissions are not calculated. The SDAB is currently in attainment of the federal and state lead standards. Furthermore, fuel used in construction equipment and most other vehicles is not leaded.

3.2.1 Construction

Construction-related activities are temporary, short-term sources of air emissions. Sources of construction-related air emissions include:

- Fugitive dust from grading activities;
- Construction equipment exhaust;
- Construction-related trips by workers, delivery trucks, and material-hauling trucks; and
- Construction-related power consumption.

Construction-related pollutants result from dust raised during demolition and grading, emissions from construction vehicles, and chemicals used during paving. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established in SDAPCD Regulation 4, Rules 50, 51, and 55. Rule 50 sets limits on the amount of particulate matter that can be discharged into the atmosphere. Rule 51 sets limits on the amount of dust and fumes that can be released into the atmosphere. Rule 55 regulates fugitive dust and provides roadway dust track-out/carry-out requirements.

Heavy-duty construction equipment is usually diesel powered. In general, emissions from diesel-powered equipment contain more NO_x, SO_x, and PM than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less ROG than gasoline-powered engines. Standard construction equipment includes tractors/loaders/backhoes, rubber-tired dozers, excavators, graders, cranes, forklifts, rollers, paving equipment, generator sets, welders, cement and mortar mixers, and air compressors.

Air emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient temperature, among other parameters. Primary inputs are the numbers of each piece of equipment and the length of each construction stage. Construction emissions were modeled assuming that the project construction would begin in August 2026 and last approximately two years. CalEEMod estimates the required construction equipment for a project based on surveys, performed by the SCAQMD and the Sacramento Metropolitan Air Quality Management District of typical construction projects, which provide a basis for scaling equipment needs and schedule with a project's size. CalEEMod default construction equipment and usage was modeled. Grading would include 74,791 cubic yards of cut and 74,893 cubic yards of fill for a total soil import quantity of 102 cubic yards.

Based on the Geotechnical Investigation (Christian Wheeler Engineering 2024), marginally rippable granite may be encountered in the northwest portion of the project site within proposed Lots 11 and 12. The Geotechnical Investigation also indicates that hardrock "floaters" may be encountered within the rippable material locations. Due to this marginally rippable granite, blasting and the use of a rock drill or hammer may be required during construction activities. The drilling/hammering and blasting activities would occur in one area then the grading equipment would relocate or remove the debris. To account for hammering/drilling, a bore/drill rig and an additional excavator were added to the default CalEEMod grading phase equipment.

Table 5 summarizes the modeled construction parameters.

Table 5 Construction Parameters					
Construction Phase	Modeled Dates	Phase Duration (Days)	Equipment ¹	Amount	Hours per Day
Demolition	August 3, 2026 – September 7, 2026	26	Concrete/Industrial Saw	1	8
			Excavators	3	8
			Rubber Tired Dozers	2	8
Site Preparation	September 8, 2026 – September 24, 2026	13	Rubber Tired Dozers	3	8
			Tractors/Loaders/Backhoes	4	8
Grading	September 25, 2026 – November 18, 2026	39	Excavators	3	8
			Grader	1	8
			Rubber Tired Dozer	1	8
			Scrapers	2	8
			Tractors/Loaders/Backhoes	2	8
Building Construction	November 19, 2026 – May 18, 2028	391	Drill/Bore Rig	1	8
			Crane	1	7
			Forklifts	3	8
			Generator Set	1	8
			Tractors/Loaders/Backhoes	3	7
Paving	May 19, 2028 – June 23, 2028	26	Welder	1	8
			Pavers	2	8
			Paving Equipment	2	8
Architectural Coatings	June 26, 2028 – July 31, 2028	26	Rollers	2	8
			Air Compressor	1	6

SOURCE: CalEEMod Output, Attachment 1.

Explosive detonation creates chemical reactions that produce a variety of air pollutants (primarily gaseous). Ejected materials are primarily fugitive dust, especially larger diameter particulate matter. The emissions per event are further determined by the explosive charge weight, which is driven by safety concerns and construction objectives. Given the large number of input variables, blasting activity air quality impact assessments are necessarily speculative. In recognition of this difficulty, the U.S. EPA assigns a generic emission factor in the development of a national emissions inventory for construction and production blasting activities.

Ammonium nitrate/fuel oil (ANFO) mixtures are commonly used as explosives because they are inexpensive and relatively safe. The explosion of 200 pounds per day of ANFO is stated by U.S. EPA AP-42 Table 13.3-1 (U.S. EPA 1972) to produce 6.7 pounds of CO, 1.7 pounds of NO_x, and 0.2 pound of SO₂. Compared to the construction activity significance thresholds, the daily emissions burden from the chemical reactions of ANFO mixtures is much less than significant. Any measurable air quality impacts would likely derive from fugitive dust associated with ejected material. The rock blasting would involve drilling blast holes, placing explosive charges in each of the blast holes, detonation, and the removal of spoils. Each blast sequence would typically consist of one hour of drilling and blast preparation, a 15-minute safety check to ensure everything is clear and ready for the blast, a blast consisting of a sequence of timed explosive charges, and up to four hours to remove spoils. This would limit blasting to two events per day in any particular area.

Blasting itself creates very little PM₁₀, as the intent of the blast is to fracture the rock layer without creating any ejected material. During the blast itself, most other on-site work in proximity to the blast is halted for safety reasons. PM₁₀ emissions would result from (1) rock drilling, (2) blasting, and (3) loading blasted debris. The unmitigated PM₁₀ emission rate stated in U.S. EPA AP-42 Table 11.9.4 (U.S. EPA 1972) for hole drilling in a rock is 0.65 pounds per hole drilled. For a single rig typical of the rock outcropping blasting, the daily PM₁₀ emission rate is 1.3 pounds per day.

The PM₁₀ emission rate as stated in U.S. EPA AP-42 Table 11.9.1 (U.S. EPA 1972) for blasting is 0.2 pounds per blast. Assuming two blasts per day, this would result in 0.4 pounds of PM₁₀ per day. Loading the fractured material into haul trucks can generate a localized dust nuisance in close proximity to the loader filling the dump truck. In the U.S. EPA reference above, a complicated formula involving wind speed (directly proportional), moisture content (inversely proportional), and the ratio of PM₁₀ to total suspended particulates predicts an unmitigated PM₁₀ emission rate of 0.19 pounds per ton loaded. Daily production of fractured rock is not currently known, but a reasonable estimate of 30 tons per day would yield 5.7 pounds of PM₁₀ per day. Total daily PM₁₀ emissions due to these activities would be 7.4 pounds per day. The PM_{2.5} fraction of PM₁₀ for dust generating activities is 21 percent (South Coast Air Quality Management District 2006), resulting in 1.6 pounds of PM_{2.5} per day. These emissions of PM₁₀ and PM_{2.5} as well as the emissions of CO, NO_x, and SO₂ discussed above were added to the total emissions calculated using CalEEMod.

3.2.2 Operation

Mobile source emissions would originate from traffic generated by the project. Energy source emissions would result from the use of natural gas. Area source emissions would result from fireplaces, the use of consumer products, as well as applying architectural coatings and landscaping activities. The project would also include an emergency generator at the proposed lift station.

3.2.2.1 Mobile Emissions

Mobile source operational emission estimates are based on the trip rate, trip length, and size of each land use. Daily trip generation rates were obtained from the Transportation Local Mobility Analysis prepared for the project (C2 Consulting Collective 2025). The project would generate 396 daily trips. CalEEMod default trip lengths and default vehicle emission factors for the soonest operational year of 2028 were used.

3.2.2.2 Energy Source Emissions

Energy source emissions associated with the project include natural gas used in space and water heating. Emissions are generated from the combustion of natural gas used in space and water heating. Emissions are based on the Residential Appliance Saturation Survey which is a comprehensive energy use assessment that includes the end use for various climate zones in California. Note that the residential portion of the project would be an all-electric development with no natural gas. Emissions were conservative and were calculated using CalEEMod defaults for natural gas.

3.2.2.3 Area Source Emissions

Area source of emissions include fireplaces, consumer products, architectural coatings, and landscaping equipment. CalEEMod calculates the emissions from wood stoves and fireplaces. The project would not include wood stoves, however, emissions associated with potential fireplaces in future residences were calculated. The fireplace fuel types are wood, gas, propane, and electric. Emissions were calculated using CalEEMod default values for the types of fireplaces and amount of wood burned or gas used.

Consumer products are chemically formulated products used by household and institutional consumers, including but not limited to detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints but do not include other paint products, furniture coatings, or architectural coatings.

For architectural coatings, emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. Emission estimates are based on the parking lot surface area, architectural coating emission factors, and a reapplication rate of 10 percent of area per year. Architectural coatings would comply with SDAPCD Rule 67.0.1, which limits the VOC content of paints sold within the county.

Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers as well as air compressors, generators, and pumps. Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

3.2.2.4 Stationary Source Emissions

The lift station would also include a Generac emergency generator. It should be noted that use of the generator is foreseeable during an emergency power outage; however, the number of hours that the generator would operate in emergency situations is speculative and emissions associated with emergency operation were not calculated. However, the generator would require routine testing and emissions associated with this testing were modeled using CalEEMod. Emissions were calculated assuming a 400-horsepower generator would be tested a maximum of one hour in a day and a total of 50 hours per year.

4.0 Project Impact Analysis

1. *Would the project conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP?*

Project consistency is based on whether the project would conflict with or obstruct implementation of the RAQS and/or applicable portions of the SIP, which would lead to increases in the frequency or severity of existing air quality violations.

The RAQS is the applicable regional air quality plan that sets forth the SDAPCD's strategies for achieving the NAAQS and CAAQS. The SDAB is designated a non-attainment area for the federal and state ozone standard. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the standards for ozone. The two pollutants addressed in the RAQS are ROG and NO_x, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions and, by extension, to maintaining and improving air quality. The RAQS was most recently updated in 2022.

The growth projections used by the SDAPCD to develop the RAQS emissions budgets are based on the population, vehicle trends, and land use plans developed in general plans and used by SANDAG in the development of the regional transportation plans and sustainable communities strategy. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the General Plan would not conflict with the RAQS. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area.

The project site is designated as Village Residential (VR-2) in the County's General Plan and zoned A70 (Limited Agricultural). The project would not require a zone change or GPA, rather, the project would utilize the Density Bonus Law as updated by AB 1287 to increase the density to 42 lots. Although the project would utilize the density bonus, it would not result in growth that is not accounted for in the RAQS. The RAQS "emissions inventory, projections, and trends are based on ozone precursor emissions data compiled and maintained by CARB. Supporting data were jointly developed by CARB, the [SDAPCD], and [SANDAG], which each play a role in collecting and reviewing the data necessary to generate comprehensive planning emission inventories" (SDAPCD 2022). CARB modeling utilizes the most current growth and emissions control data available to provide comprehensive projections of emissions for each year from 2022 to 2050. Current regional growth projections are accounted for in the RAQS, and the project would provide additional housing needed to meet the needs of the region. Therefore, the project would be

consistent with the growth projections accounted for in the RAQS. Further, as shown in Tables 6 and 7 below, the project would not result in construction or operational emissions in excess of the applicable significance thresholds for all criteria pollutants. The project would, therefore, not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not obstruct or conflict with implementation of the RAQS. Impacts would be considered less than significant.

2. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (PM₁₀, PM_{2.5}, or exceed quantitative thresholds for ozone precursors: NO_x and ROG)?*

A project may have a significant direct air quality impact if the project exceeds any of the County's SLTs (see Table 4).

Construction Emissions

A project may result in a cumulatively considerable net increase during construction phase if:

- A project that has a significant direct impact on air quality with regard to emissions of PM₁₀, PM_{2.5}, NO_x, and/or ROG, would also have a significant cumulatively considerable net increase.
- In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified above.

Construction activities would be subject to several control measures per the requirements of the County, SDAPCD rules, and CARB Airborne Toxic Control Measures. The following required control measures have been incorporated into the calculations of construction emissions:

- Per the County's *Standard Mitigation and Project Design Consideration Grading, Clearing and Watercourses Ordinance* Section 87.428, "All clearing and grading shall be carried out with dust control measures adequate to prevent creation of a nuisance to persons or public or private property. Clearing, grading or improvement plans shall require that measures such as the following be undertaken to achieve this result: watering, application of surfactants, shrouding, control of vehicle speeds, paving of access areas, or other operational or technological measures to reduce dispersion of dust."
- Per SDAPCD Rule 67.0.1, the applicant shall use regulated coatings for all architectural coating activities.
- Per CARB's Airborne Toxic Control Measure 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturers' specifications or for safety reasons.

Emissions due to project construction were calculated using the methodology and parameters discussed in Section 3.2.1. Table 6 shows the total projected construction maximum daily emission levels for each criteria pollutant. The CalEEMod output files are contained in Attachment 1.

Table 6 Summary of Maximum Construction Emissions (pounds per day)						
Phase	Pollutant					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Demolition	2	21	20	<1	1	1
Site Preparation	3	29	30	<1	9	5
Grading Total	3	31	39	<1	12	5
<i>CalEEMod Calculations</i>	3	29	32	<1	5	3
<i>Blasting Activities</i>	0	2	7	<1	7	2
Building Construction	1	10	14	<1	1	<1
Paving	1	7	10	<1	<1	<1
Architectural Coatings	20	1	1	<1	<1	<1
Maximum Daily Emissions	20	31	39	<1	12	5
<i>County Screening Level Thresholds</i>	<i>75</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>55</i>
SOURCE: CalEEMod Output, Attachment 1						

Note that the emissions summarized in Table 6 are the maximum emissions for each pollutant that would occur during each phase based on all modeled construction equipment (see Table 5) being active on the same day. Actual construction activities would vary day to day, with all equipment active on some days, and less equipment active on other days depending on the construction task. These are the maximum emissions that would occur in a day. As shown in Table 6, maximum construction emissions would be less than the County’s SLTs for all criteria pollutants. Therefore, the project would not generate emissions in quantities that would result in an exceedance of the NAAQS or CAAQS for ozone, PM₁₀, or PM_{2.5}, and direct impacts would be less than significant. As discussed in Section 3.1, the County’s SLT aligns with attainment of the NAAQS, which were developed to protect the public health, specifically the health of sensitive populations, including people with asthma, children, and the elderly. Consequently, project construction would have a less than significant impact on public health.

Air quality impacts are basin-wide, and air quality is affected by all pollutant sources in the basin. As the individual project thresholds are designed to help achieve attainment with cumulative basin-wide standards, they are also appropriate for assessing the project’s contribution to cumulative impacts. As emissions would be less than the SLTs, project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, and impacts would be cumulatively less than significant.

Operational Emissions

A project may result in a cumulatively considerable net increase during operation phase if:

- A project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of PM₁₀, PM_{2.5}, NO_x, and/or ROG would also have a significant cumulatively considerable net increase.
- Projects that cause road intersections to operate at or below a Level of Service E (analysis only required when the addition of peak-hour trips from the proposed project and the surrounding projects exceeds 2,000) and create a CO “hotspot” create a cumulatively considerable net increase of CO.

Operational emissions associated with the project were quantified using CalEEMod and the methodology summarized in Section 3.2.2. These emissions include mobile, area, and energy sources. Daily operational emissions are summarized in Table 7. The CalEEMod output files are contained in Attachment 1.

Table 7 Summary of Project Operational Emissions (pounds per day)						
Source	Pollutant					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Mobile	1	1	9	<1	2	1
Area	65	1	72	<1	10	10
Energy	<1	<1	<1	<1	<1	<1
Emergency Generator Testing	1	2	2	<1	<1	<1
Total	67	4	84	<1	12	10
<i>County Screening Level Thresholds</i>	<i>75</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>55</i>
SOURCE: CalEEMod Output, Attachment 1						
NOTE: Totals may vary due to independent rounding.						

As shown in Table 7, the project’s daily operational emissions would not exceed the SLTs for any pollutant. As discussed in Section 3.1, the County’s SLTs align with attainment of the NAAQS, which were developed to protect the public health, specifically the health of sensitive populations, including people with asthma, children, and the elderly. As emissions would be less than the SLTs, project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, and impacts would be cumulatively less than significant.

3. *Would the project expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, day-care centers and project residents) to substantial pollutant concentrations?*

Air quality regulators typically define sensitive receptors as schools (preschool–12th grade), hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purposes of CEQA analysis in San Diego County, the definition of a sensitive receptor also includes residents. As discussed, single-family residential uses are located in the vicinity of the project site as close as 30 feet from the project boundary.

The two primary emissions of concern regarding health effects for land development projects are DPM and CO. Projects that would site sensitive receptors near potential CO hotspots or would contribute vehicle traffic to local intersections where a CO hotspot could occur would be considered as having a potentially significant impact. The project would not introduce any new sources of TACs; therefore, project operation would not produce a cancer risk.

Construction-Related Diesel Particulate Matter

Construction of the project and associated infrastructure would result in short-term diesel exhaust emissions from on-site heavy-duty equipment. Construction of the project would result in the generation of diesel-exhaust DPM emissions from the use of off-road diesel equipment required for site preparation and excavation, paving, and other construction activities and on-road diesel equipment used to bring materials to and from the project site. Generation of DPM from construction projects typically occurs in a single area for a short period. Construction is anticipated to last for approximately two years. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a

longer exposure period would result in a higher exposure level. The risks are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on 9-, 30-, and 70-year exposure periods; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, if the duration of proposed construction activities near any specific sensitive receptor were two years, the exposure would be 7 percent of the total 30-year exposure period used for health risk calculation. Further, construction activities would be subject to several control measures per the requirements of the County, SDAPCD rules, and CARB Airborne Toxic Control Measures (see Issue 2, Construction Emissions). Specifically, per CARB's Airborne Toxic Control Measures 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed five minutes unless more time is required per engine manufacturers' specifications or for safety reasons. Due to the short-term construction duration and the limited construction emissions, there is very low potential for fugitive dust or DPM to impact sensitive receptors during construction. The total project construction DPM emissions are not of a magnitude and duration that could create significant air toxic risks (maximum incremental cancer risk greater than one in one million without the application of best available control technology for toxics or a health hazard index greater than one) to the nearest receptors during construction. Compliance with the SDAPCD rules and regulations would reduce the fugitive dust emissions during project construction and associated impacts to sensitive receptors. Thus, the project's construction emissions would not have the potential to significantly impact the nearby residents. Therefore, the project would not expose sensitive receptors to substantial levels of TACs during construction, and impacts would be less than significant.

CO Hotspots

Localized CO concentration is a direct function of motor vehicle activity at signalized intersections (e.g., idling time and traffic flow conditions), particularly during peak commute hours and meteorological conditions. The SDAB is a CO maintenance area under the federal CAA. This means that SDAB was previously a non-attainment area and is currently implementing a 10-year plan for continuing to meet and maintain air quality standards. Due to increased requirements for cleaner vehicles, equipment, and fuels, CO levels in the state have dropped substantially. All air basins are attainment or maintenance areas for CO. Therefore, more recent screening procedures based on more current methodologies have been developed. The Bay Area Air Quality Management District developed a screening threshold in their 2022 CEQA Guidelines (Bay Area Air Quality Management District 2022). These screening criteria are considered applicable in the SDAB because the San Francisco Bay Air Basin and the SDAB have the same CO maintenance designations, and the vehicle classifications in the regions are similar. If the following screening criteria are met, operation of a project would result in less than significant impacts related to CO:

- The project is consistent with an applicable congestion management program established by the County congestion management agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- Project-generated traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- Project-generated traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Based on the Transportation Local Mobility Analysis prepared for the project (C2 Consulting Collective 2025), peak hour volumes at the study area intersections would be significantly less than 44,000 vehicles per hour. The project-related peak

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hour trips added to affected intersection would range from 0 to 15 vehicles per hour and would not be substantial. Therefore, the project would not result in a CO hot spot and impacts would be less than significant.

The project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

4. *Would the project expose considerable number of persons to objectionable odors?*

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 41700 prohibit the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

The potential for an odor impact is dependent on a number of variables, including the nature of the odor source, distance between the receptor and odor source, and local meteorological conditions. During construction, construction equipment may generate some nuisance odors. Sensitive receptors near the project site include residential uses; however, exposure to odors associated with project construction would be short term and temporary in nature. Further, per CARB's Airborne Toxic Control Measures 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturers' specifications or for safety reasons. Therefore, project construction would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

Once operational, the residential portion of the project would not be a source of odors. As discussed, the project would include a sewer lift station. The sewer lift station would be equipped with an odor control system consisting of activated carbon. Specifications for this odor control system are provided in Attachment 2. With proper installation and maintenance of this system, which would be performed by the homeowners association, impacts associated with the sewer lift station would be less than significant.

If you have any questions about the results of this analysis, please contact me at jfleming@reconenvironmental.com or (619) 308-9333 extension 177.

Sincerely,


Jessica Fleming
Air Quality Specialist

JLF:jg

Attachment

5.0 Certification

The following is a list of preparers, persons, and organizations involved with the air quality analysis.

RECON Environmental, Inc.

Jessica Fleming, County-approved Air Quality Consultant
Morgan Weintraub, Associate Project Manager
Frank McDermott, GIS/UAV Manager
Jennifer Gutierrez, Production Specialist
Stacey Higgins, Senior Production Specialist

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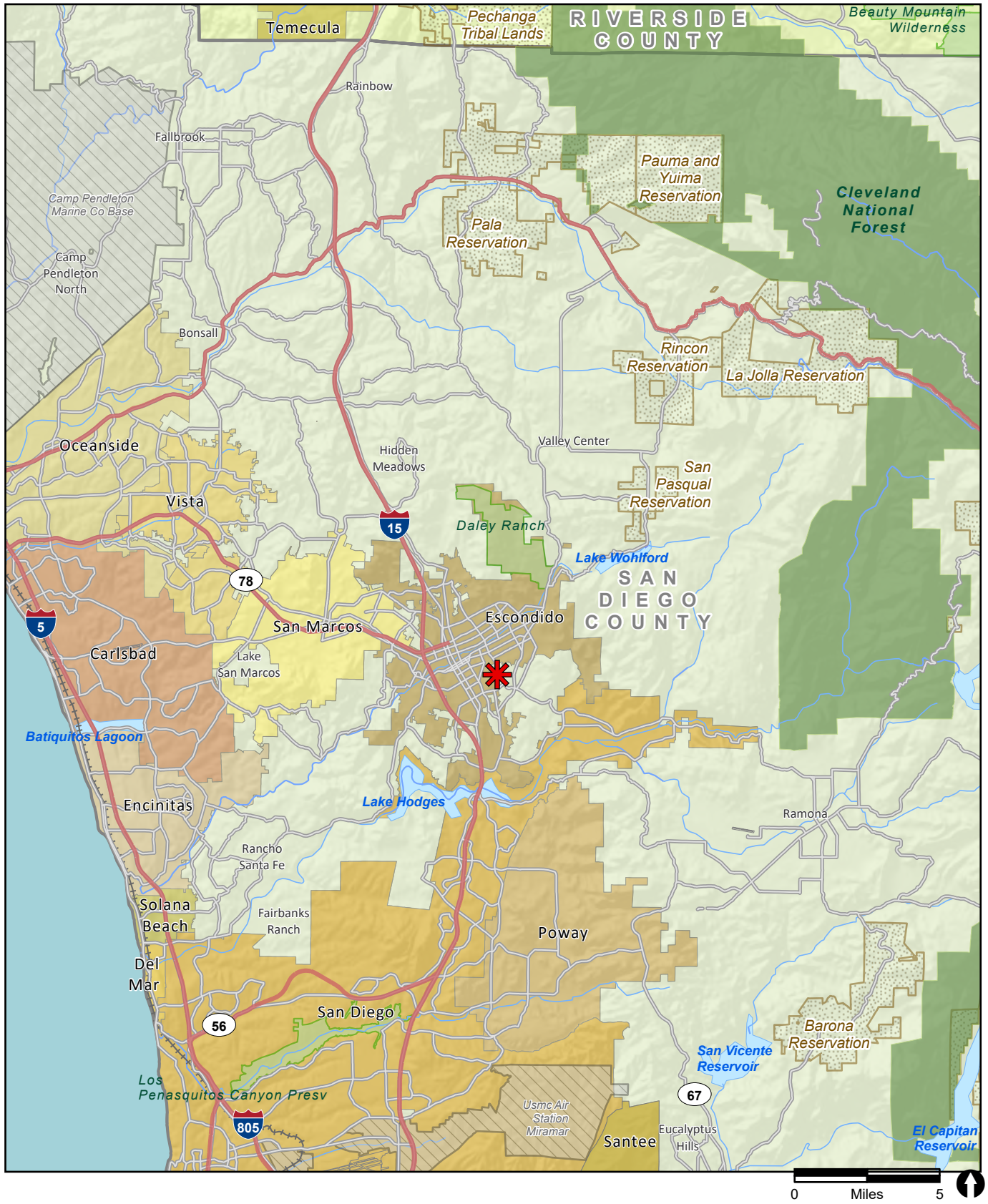
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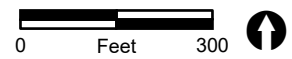
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 Project Location

FIGURE 1
Regional Location



 Project Boundary

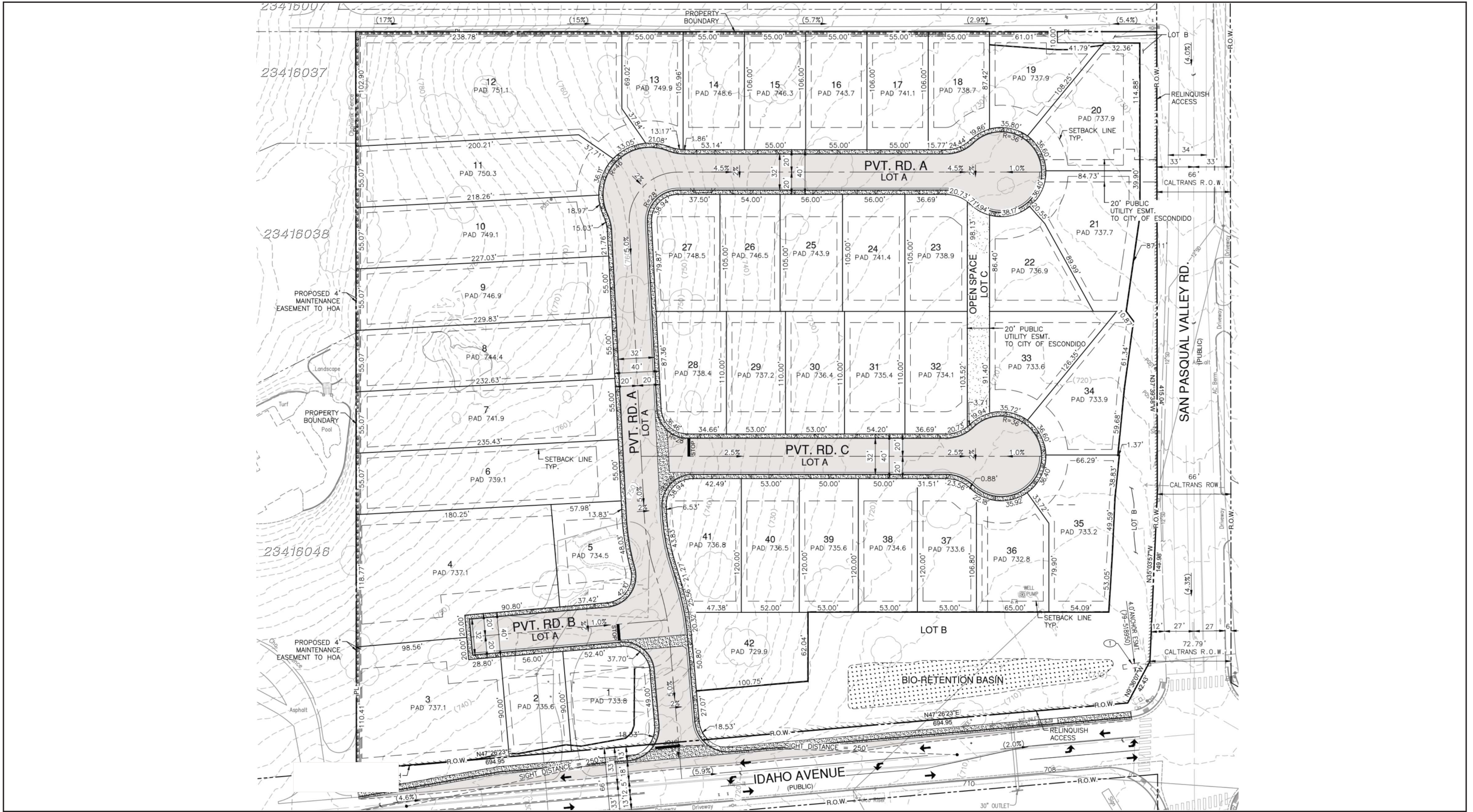


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ATTACHMENTS

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CalEEMod Output

Pasqual Heights Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Pasqual Heights
Construction Start Date	8/3/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	26.6
Location	33.11606808228622, -117.06074733621625
County	San Diego
City	Unincorporated
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6285
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
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
Single Family Housing	42.0	Dwelling Unit	10.1	81,900	491,940	—	117	—

General Light Industry	1.00	1000sqft	0.23	1,000	2,000	—	—	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.0	20.0	29.3	32.1	0.07	1.24	7.81	9.06	1.14	3.97	5.12	—	7,380	7,380	0.30	0.07	0.86	7,410
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.95	3.32	29.4	31.9	0.07	1.17	3.81	4.98	1.08	1.48	2.56	—	7,367	7,367	0.30	0.07	0.02	7,396
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.83	1.77	6.85	9.69	0.02	0.26	0.72	0.98	0.24	0.31	0.55	—	1,889	1,889	0.08	0.03	0.22	1,900
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.33	0.32	1.25	1.77	< 0.005	0.05	0.13	0.18	0.04	0.06	0.10	—	313	313	0.01	< 0.005	0.04	314
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.95	3.32	29.3	32.1	0.07	1.24	7.81	9.06	1.14	3.97	5.12	—	7,380	7,380	0.30	0.07	0.86	7,410
2027	1.30	1.09	9.57	13.6	0.02	0.34	0.16	0.50	0.31	0.04	0.35	—	2,651	2,651	0.11	0.04	0.71	2,666
2028	20.0	20.0	9.10	13.6	0.02	0.30	0.16	0.46	0.28	0.04	0.32	—	2,646	2,646	0.10	0.04	0.64	2,661
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.95	3.32	29.4	31.9	0.07	1.17	3.81	4.98	1.08	1.48	2.56	—	7,367	7,367	0.30	0.07	0.02	7,396
2027	1.30	1.09	9.59	13.6	0.02	0.34	0.16	0.50	0.31	0.04	0.35	—	2,643	2,643	0.11	0.04	0.02	2,658
2028	1.25	1.05	9.11	13.5	0.02	0.30	0.16	0.46	0.28	0.04	0.32	—	2,638	2,638	0.10	0.04	0.02	2,653
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.87	0.73	6.51	7.01	0.01	0.26	0.72	0.98	0.24	0.31	0.55	—	1,464	1,464	0.06	0.02	0.10	1,470
2027	0.93	0.78	6.85	9.69	0.02	0.24	0.11	0.35	0.22	0.03	0.25	—	1,889	1,889	0.08	0.03	0.22	1,900
2028	1.83	1.77	3.01	4.51	0.01	0.10	0.05	0.16	0.09	0.01	0.11	—	846	846	0.03	0.01	0.09	851
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.16	0.13	1.19	1.28	< 0.005	0.05	0.13	0.18	0.04	0.06	0.10	—	242	242	0.01	< 0.005	0.02	243
2027	0.17	0.14	1.25	1.77	< 0.005	0.04	0.02	0.06	0.04	0.01	0.05	—	313	313	0.01	< 0.005	0.04	314
2028	0.33	0.32	0.55	0.82	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	140	140	0.01	< 0.005	0.01	141

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	67.7	67.4	4.14	83.5	0.14	9.72	2.06	11.8	9.72	0.52	10.2	957	3,594	4,551	2.10	0.19	7.21	4,667
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	67.4	67.2	4.21	80.6	0.14	9.72	2.06	11.8	9.72	0.52	10.2	957	3,485	4,442	2.10	0.19	1.01	4,554
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.8	17.7	1.75	26.0	0.05	2.21	1.98	4.19	2.21	0.50	2.71	230	2,787	3,017	2.08	0.12	3.53	3,109
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.25	3.23	0.32	4.74	0.01	0.40	0.36	0.76	0.40	0.09	0.49	38.0	461	499	0.34	0.02	0.58	515
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.54	1.43	0.87	9.40	0.02	0.02	2.06	2.08	0.02	0.52	0.54	—	2,328	2,328	0.11	0.09	6.36	2,365
Area	65.4	65.3	1.12	72.3	0.11	9.58	—	9.58	9.58	—	9.58	938	493	1,431	0.01	0.08	—	1,456
Energy	0.04	0.02	0.31	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	430	430	0.06	< 0.005	—	432
Water	—	—	—	—	—	—	—	—	—	—	—	3.27	7.35	10.6	0.34	0.01	—	21.7
Waste	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85	0.85
Stationary	0.72	0.66	1.83	1.67	< 0.005	0.10	0.00	0.10	0.10	0.00	0.10	0.00	336	336	0.01	< 0.005	0.00	337
Total	67.7	67.4	4.14	83.5	0.14	9.72	2.06	11.8	9.72	0.52	10.2	957	3,594	4,551	2.10	0.19	7.21	4,667
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.52	1.40	0.96	8.96	0.02	0.02	2.06	2.08	0.02	0.52	0.54	—	2,226	2,226	0.12	0.10	0.16	2,258
Area	65.1	65.1	1.10	69.9	0.11	9.58	—	9.58	9.58	—	9.58	938	486	1,425	0.01	0.08	—	1,450
Energy	0.04	0.02	0.31	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	430	430	0.06	< 0.005	—	432
Water	—	—	—	—	—	—	—	—	—	—	—	3.27	7.35	10.6	0.34	0.01	—	21.7
Waste	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85	0.85
Stationary	0.72	0.66	1.83	1.67	< 0.005	0.10	0.00	0.10	0.10	0.00	0.10	0.00	336	336	0.01	< 0.005	0.00	337
Total	67.4	67.2	4.21	80.6	0.14	9.72	2.06	11.8	9.72	0.52	10.2	957	3,485	4,442	2.10	0.19	1.01	4,554
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.47	1.35	0.92	8.73	0.02	0.02	1.98	2.00	0.02	0.50	0.52	—	2,191	2,191	0.11	0.09	2.69	2,225
Area	16.2	16.2	0.26	16.9	0.03	2.15	—	2.15	2.15	—	2.15	211	113	323	< 0.005	0.02	—	329
Energy	0.04	0.02	0.31	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	430	430	0.06	< 0.005	—	432

Water	—	—	—	—	—	—	—	—	—	—	—	3.27	7.35	10.6	0.34	0.01	—	21.7
Waste	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85	0.85
Stationary	0.10	0.09	0.25	0.23	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	46.0	46.0	< 0.005	< 0.005	0.00	46.2
Total	17.8	17.7	1.75	26.0	0.05	2.21	1.98	4.19	2.21	0.50	2.71	230	2,787	3,017	2.08	0.12	3.53	3,109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.27	0.25	0.17	1.59	< 0.005	< 0.005	0.36	0.36	< 0.005	0.09	0.09	—	363	363	0.02	0.02	0.44	368
Area	2.96	2.96	0.05	3.08	< 0.005	0.39	—	0.39	0.39	—	0.39	34.9	18.6	53.5	< 0.005	< 0.005	—	54.5
Energy	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	71.2	71.2	0.01	< 0.005	—	71.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.54	1.22	1.76	0.06	< 0.005	—	3.59
Waste	—	—	—	—	—	—	—	—	—	—	—	2.59	0.00	2.59	0.26	0.00	—	9.05
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Stationary	0.02	0.02	0.05	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	7.62	7.62	< 0.005	< 0.005	0.00	7.64
Total	3.25	3.23	0.32	4.74	0.01	0.40	0.36	0.76	0.40	0.09	0.49	38.0	461	499	0.34	0.02	0.58	515

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438

Demolition	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.47	1.35	< 0.005	0.06	—	0.06	0.06	—	0.06	—	244	244	0.01	< 0.005	—	245
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.4	40.4	< 0.005	< 0.005	—	40.5
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	139	139	0.01	< 0.005	0.49	142
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.5	78.5	< 0.005	0.01	0.16	82.5

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.46	9.46	< 0.005	< 0.005	0.01	9.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.59	5.59	< 0.005	< 0.005	0.01	5.87
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.57	1.57	< 0.005	< 0.005	< 0.005	1.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.97

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.04	1.03	< 0.005	0.04	—	0.04	0.04	—	0.04	—	189	189	0.01	< 0.005	—	189
Dust From Material Movement	—	—	—	—	—	—	0.27	0.27	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.2	31.2	< 0.005	< 0.005	—	31.3
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.76	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	163	163	0.01	0.01	0.57	165
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.52	5.52	< 0.005	< 0.005	0.01	5.60

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.93	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.85	3.23	29.2	31.0	0.07	1.17	—	1.17	1.08	—	1.08	—	7,125	7,125	0.29	0.06	—	7,149
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.85	3.23	29.2	31.0	0.07	1.17	—	1.17	1.08	—	1.08	—	7,125	7,125	0.29	0.06	—	7,149

Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.35	3.13	3.31	0.01	0.13	—	0.13	0.12	—	0.12	—	761	761	0.03	0.01	—	764
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.57	0.60	< 0.005	0.02	—	0.02	0.02	—	0.02	—	126	126	0.01	< 0.005	—	126
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.09	0.07	1.08	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	232	232	0.01	0.01	0.81	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.4	23.4	< 0.005	< 0.005	0.05	24.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.95	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	219	219	0.01	0.01	0.02	222
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.5	23.5	< 0.005	< 0.005	< 0.005	24.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.7	23.7	< 0.005	< 0.005	0.04	24.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.51	2.51	< 0.005	< 0.005	< 0.005	2.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.92	3.92	< 0.005	< 0.005	0.01	3.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.41	0.41	< 0.005	< 0.005	< 0.005	0.44

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.83	1.09	< 0.005	0.03	—	0.03	0.03	—	0.03	—	202	202	0.01	< 0.005	—	202
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	33.4	33.4	< 0.005	< 0.005	—	33.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	0.01	0.01	0.01	138
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	114	114	< 0.005	0.02	0.01	119
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	0.02	11.8
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.62	9.62	< 0.005	< 0.005	0.01	10.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.92	1.92	< 0.005	< 0.005	< 0.005	1.95
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.59	1.59	< 0.005	< 0.005	< 0.005	1.66
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	142	142	0.01	0.01	0.46	144
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	112	112	< 0.005	0.02	0.25	117
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.56	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	0.01	0.01	136
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	112	112	< 0.005	0.02	0.01	117
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.40	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	96.7	96.7	< 0.005	< 0.005	0.14	98.0
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.9	79.9	< 0.005	0.01	0.08	83.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.0	16.0	< 0.005	< 0.005	0.02	16.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.01	13.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2028) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.43	3.52	0.01	0.08	—	0.08	0.08	—	0.08	—	652	652	0.03	0.01	—	654
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.44	0.64	< 0.005	0.01	—	0.01	0.01	—	0.01	—	108	108	< 0.005	< 0.005	—	108
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.06	0.05	0.04	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	139	139	< 0.005	0.01	0.42	141
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	109	109	< 0.005	0.02	0.22	114
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.53	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	< 0.005	0.01	0.01	133
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	109	109	< 0.005	0.02	0.01	114
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.2	36.2	< 0.005	< 0.005	0.05	36.6
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.7	29.7	< 0.005	< 0.005	0.03	31.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.99	5.99	< 0.005	< 0.005	0.01	6.07
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.91	4.91	< 0.005	< 0.005	< 0.005	5.13
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.47	0.71	< 0.005	0.02	—	0.02	0.02	—	0.02	—	108	108	< 0.005	< 0.005	—	108	
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.8	17.8	< 0.005	< 0.005	—	17.9	
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.58	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	< 0.005	< 0.005	0.40	137	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.14	9.14	< 0.005	< 0.005	0.01	9.26	

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.51	1.51	< 0.005	< 0.005	< 0.005	1.53	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	19.9	19.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.51	9.51	< 0.005	< 0.005	—	9.54

Architectural	1.42	1.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.57	1.57	< 0.005	< 0.005	—	1.58	
Architectural Coatings	0.26	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.9	27.9	< 0.005	< 0.005	0.08	28.3	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.89	1.89	< 0.005	< 0.005	< 0.005	1.92	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.54	1.43	0.87	9.37	0.02	0.02	2.05	2.07	0.02	0.52	0.54	—	2,323	2,323	0.11	0.09	6.35	2,359
General Light Industry	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	5.87	5.87	< 0.005	< 0.005	0.02	5.96
Total	1.54	1.43	0.87	9.40	0.02	0.02	2.06	2.08	0.02	0.52	0.54	—	2,328	2,328	0.11	0.09	6.36	2,365
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.52	1.40	0.96	8.94	0.02	0.02	2.05	2.07	0.02	0.52	0.54	—	2,220	2,220	0.12	0.10	0.16	2,252
General Light Industry	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	5.61	5.61	< 0.005	< 0.005	< 0.005	5.69
Total	1.52	1.40	0.96	8.96	0.02	0.02	2.06	2.08	0.02	0.52	0.54	—	2,226	2,226	0.12	0.10	0.16	2,258
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.27	0.25	0.17	1.59	< 0.005	< 0.005	0.36	0.36	< 0.005	0.09	0.09	—	362	362	0.02	0.02	0.44	367

General Light Industry	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.95
Total	0.27	0.25	0.17	1.59	< 0.005	< 0.005	0.36	0.36	< 0.005	0.09	0.09	—	363	363	0.02	0.02	0.44	368

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	31.9	31.9	0.02	< 0.005	—	33.3
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	1.11	1.11	< 0.005	< 0.005	—	1.16
Total	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0	0.02	< 0.005	—	34.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	31.9	31.9	0.02	< 0.005	—	33.3
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	1.11	1.11	< 0.005	< 0.005	—	1.16
Total	—	—	—	—	—	—	—	—	—	—	—	—	33.0	33.0	0.02	< 0.005	—	34.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	5.28	5.28	< 0.005	< 0.005	—	5.51

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18	< 0.005	< 0.005	—	0.19
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	5.46	5.46	< 0.005	< 0.005	—	5.70

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	384	384	0.03	< 0.005	—	385
General Light Industry	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.9	12.9	< 0.005	< 0.005	—	13.0
Total	0.04	0.02	0.31	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	397	397	0.04	< 0.005	—	398
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	384	384	0.03	< 0.005	—	385
General Light Industry	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.9	12.9	< 0.005	< 0.005	—	13.0
Total	0.04	0.02	0.31	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	397	397	0.04	< 0.005	—	398
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	< 0.005	0.06	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	63.6	63.6	0.01	< 0.005	—	63.7

General Light Industry	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.14	2.14	< 0.005	< 0.005	—	2.15
Total	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.7	65.7	0.01	< 0.005	—	65.9

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	63.2	63.2	1.10	69.9	0.11	9.58	—	9.58	9.58	—	9.58	938	486	1,425	0.01	0.08	—	1,450
Consumer Products	1.77	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.23	0.21	0.02	2.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.55	6.55	< 0.005	< 0.005	—	6.57
Total	65.4	65.3	1.12	72.3	0.11	9.58	—	9.58	9.58	—	9.58	938	493	1,431	0.01	0.08	—	1,456
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	63.2	63.2	1.10	69.9	0.11	9.58	—	9.58	9.58	—	9.58	938	486	1,425	0.01	0.08	—	1,450
Consumer Products	1.77	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	65.1	65.1	1.10	69.9	0.11	9.58	—	9.58	9.58	—	9.58	938	486	1,425	0.01	0.08	—	1,450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	2.59	2.59	0.05	2.86	< 0.005	0.39	—	0.39	0.39	—	0.39	34.9	18.1	53.0	< 0.005	< 0.005	—	53.9
Consumer Products	0.32	0.32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.53	0.53	< 0.005	< 0.005	—	0.54
Total	2.96	2.96	0.05	3.08	< 0.005	0.39	—	0.39	0.39	—	0.39	34.9	18.6	53.5	< 0.005	< 0.005	—	54.5

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.83	7.13	9.96	0.30	0.01	—	19.6
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.44	0.21	0.66	0.05	< 0.005	—	2.12
Total	—	—	—	—	—	—	—	—	—	—	—	3.27	7.35	10.6	0.34	0.01	—	21.7

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.83	7.13	9.96	0.30	0.01	—	19.6
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.44	0.21	0.66	0.05	< 0.005	—	2.12
Total	—	—	—	—	—	—	—	—	—	—	—	3.27	7.35	10.6	0.34	0.01	—	21.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.47	1.18	1.65	0.05	< 0.005	—	3.24
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.07	0.04	0.11	0.01	< 0.005	—	0.35
Total	—	—	—	—	—	—	—	—	—	—	—	0.54	1.22	1.76	0.06	< 0.005	—	3.59

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	14.9	0.00	14.9	1.49	0.00	—	52.3
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.34
Total	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	14.9	0.00	14.9	1.49	0.00	—	52.3
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.34
Total	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.47	0.00	2.47	0.25	0.00	—	8.66
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.11	0.00	0.11	0.01	0.00	—	0.39
Total	—	—	—	—	—	—	—	—	—	—	—	2.59	0.00	2.59	0.26	0.00	—	9.05

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.26	0.26
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85	0.85

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.26	0.26
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85	0.85
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14

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)

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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipm ent Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.72	0.66	1.83	1.67	< 0.005	0.10	0.00	0.10	0.10	0.00	0.10	0.00	336	336	0.01	< 0.005	0.00	337
Total	0.72	0.66	1.83	1.67	< 0.005	0.10	0.00	0.10	0.10	0.00	0.10	0.00	336	336	0.01	< 0.005	0.00	337
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.72	0.66	1.83	1.67	< 0.005	0.10	0.00	0.10	0.10	0.00	0.10	0.00	336	336	0.01	< 0.005	0.00	337
Total	0.72	0.66	1.83	1.67	< 0.005	0.10	0.00	0.10	0.10	0.00	0.10	0.00	336	336	0.01	< 0.005	0.00	337
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.02	0.02	0.05	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	7.62	7.62	< 0.005	< 0.005	0.00	7.64
Total	0.02	0.02	0.05	0.04	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	7.62	7.62	< 0.005	< 0.005	0.00	7.64

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)

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	8/3/2026	9/7/2026	5.00	26.0	—

Site Preparation	Site Preparation	9/8/2026	9/24/2026	5.00	13.0	—
Grading	Grading	9/25/2026	11/18/2026	5.00	39.0	—
Building Construction	Building Construction	11/19/2026	5/18/2028	5.00	391	—
Paving	Paving	5/19/2028	6/23/2028	5.00	26.0	—
Architectural Coating	Architectural Coating	6/26/2028	7/31/2028	5.00	26.0	—

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/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	3.00	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/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Building Construction	Cranes	Diesel	Average	1.00	7.00	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/Back hoes	Diesel	Average	3.00	7.00	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	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	12.0	LDA,LDT1,LDT2
Demolition	Vendor	—	7.63	HHDT,MHDT
Demolition	Hauling	1.12	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	25.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.33	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	15.5	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	4.65	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	3.11	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	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	165,848	55,283	1,500	500	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	2,500	—
Site Preparation	—	—	19.5	0.00	—

Grading	102	—	117	0.00	—
Paving	0.00	0.00	0.00	0.00	0.46

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.46	100%
General Light Industry	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	589	0.03	< 0.005
2027	0.00	589	0.03	< 0.005
2028	0.00	589	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
Single Family Housing	396	401	359	142,985	2,878	2,908	2,606	1,037,837
General Light Industry	1.00	1.00	1.00	365	7.36	7.36	7.36	2,685

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	15
Gas Fireplaces	23
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	4
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

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)
165847.5	55,283	1,500	500	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

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)
Single Family Housing	257,934	45.1	0.0330	0.0040	1,197,711
General Light Industry	8,973	45.1	0.0330	0.0040	40,364

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,475,589	8,985,328
General Light Industry	231,250	29,888

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	27.7	—
General Light Industry	1.24	—

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
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Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
General Light 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
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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
Emergency Generator	Diesel	1.00	1.00	50.0	400	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)
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5.17. User Defined

Equipment Type	Fuel Type
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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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	16.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	15.8	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	N/A	N/A	N/A	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	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	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 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	51.9
AQ-PM	13.5
AQ-DPM	47.5
Drinking Water	35.3
Lead Risk Housing	69.8
Pesticides	62.4
Toxic Releases	11.0
Traffic	16.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	41.4
Haz Waste Facilities/Generators	41.8
Impaired Water Bodies	90.1
Solid Waste	75.7
Sensitive Population	—
Asthma	38.7

Cardio-vascular	37.7
Low Birth Weights	55.1
Socioeconomic Factor Indicators	—
Education	66.9
Housing	73.7
Linguistic	67.2
Poverty	74.0
Unemployment	49.9

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	25.33042474
Employed	38.86821506
Median HI	37.62350828
Education	—
Bachelor's or higher	38.0341332
High school enrollment	100
Preschool enrollment	36.9177467
Transportation	—
Auto Access	45.25856538
Active commuting	53.22725523
Social	—
2-parent households	68.75401001
Voting	57.21801617
Neighborhood	—
Alcohol availability	70.97395098

Park access	8.995252149
Retail density	31.07917362
Supermarket access	49.54446298
Tree canopy	48.73604517
Housing	—
Homeownership	26.07468241
Housing habitability	26.39548313
Low-inc homeowner severe housing cost burden	44.74528423
Low-inc renter severe housing cost burden	22.03259335
Uncrowded housing	27.15257282
Health Outcomes	—
Insured adults	9.983318363
Arthritis	31.2
Asthma ER Admissions	68.2
High Blood Pressure	68.0
Cancer (excluding skin)	52.2
Asthma	18.0
Coronary Heart Disease	28.5
Chronic Obstructive Pulmonary Disease	9.6
Diagnosed Diabetes	36.9
Life Expectancy at Birth	27.5
Cognitively Disabled	35.0
Physically Disabled	47.8
Heart Attack ER Admissions	76.4
Mental Health Not Good	15.9
Chronic Kidney Disease	45.1
Obesity	27.3
Pedestrian Injuries	41.3

Physical Health Not Good	23.1
Stroke	26.0
Health Risk Behaviors	—
Binge Drinking	26.9
Current Smoker	13.0
No Leisure Time for Physical Activity	26.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	5.3
Elderly	68.4
English Speaking	42.0
Foreign-born	42.7
Outdoor Workers	15.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	67.6
Traffic Density	28.8
Traffic Access	50.3
Other Indices	—
Hardship	68.1
Other Decision Support	—
2016 Voting	66.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	58.0
Healthy Places Index Score for Project Location (b)	35.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

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	10.35 total acres 42 units Lift Station on 0.23 acre lot
Construction: Construction Phases	Construction begins August 2026 and lasts 2 years Default CalEEMod phase lengths adjusted proportionately
Construction: Paving	Paved area (CalEEMod default) assumed 100% asphalt
Operations: Hearths	No wood stoves. Default fireplaces modeled.
Operations: Vehicle Data	Residential - Default ITE trip rates consistent with traffic report Lift Station - 1 daily trip modeled for maintenance
Construction: Off-Road Equipment	Additional excavator and drill/bore rig added to grading phase to account for blasting operations

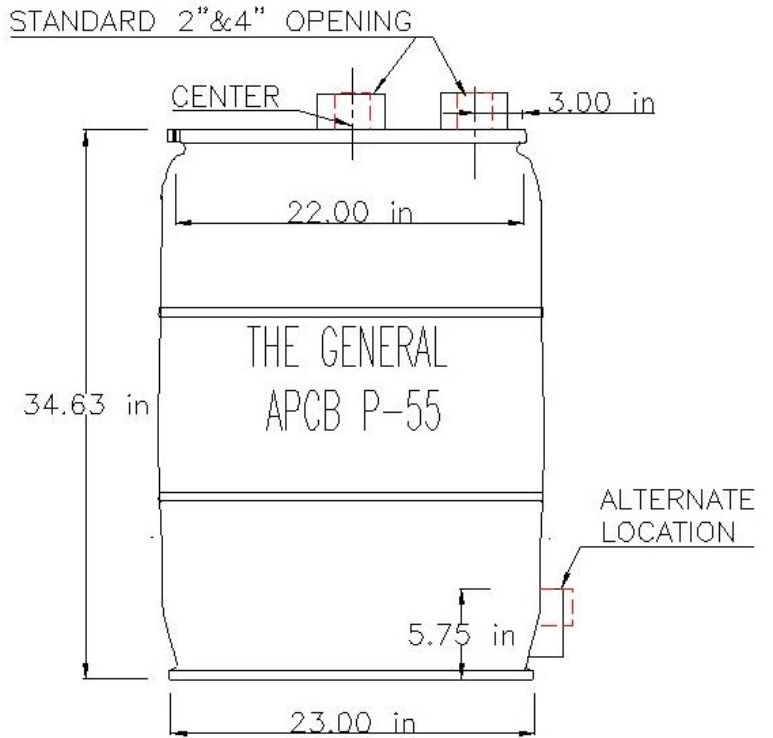
ATTACHMENT 2
Odor Control Specifications



THE GENERAL-55P

HDPE air pollution control barrels

THE GENERAL AIR POLLUTION CONTROL BARREL – 55P is the same as our steel drums except that it is made from HDPE for corrosion resistance. It is ready to use when delivered and provides a low cost, self-contained air purification filter. We make the drum with 2" and 4" connections in different locations, so you will have to let us know the size and location and type of connections you require when you place your order. The 2" model flows up to 100 cfm and the 4" model flows up to 165 cfm.



<u>SPECIFICATIONS</u>	<u>55P-2</u>	<u>55P-4</u>
A – Diameter, Outside	23"	23"
B – Height, Outside	35"	35"
Inlet Fitting	2" PIPE	4" PIPE
Outlet Fitting	2" PIPE	4" PIPE
Drain Fitting	1" OPTIONAL	1" OPTIONAL
Carbon Weight, lbs.	150	150
Max. Flow Rate, cfm	100	165
Maximum Pressure, psig	5 - 7	5 - 7
Max. Temp., Deg F	110	110
Flow Direction	Up/Down	Up/Down

Activated Carbon - The General vapor adsorbers are filled with virgin, high activity, activated carbon. Any of virgin coal, coconut shell, reactivated or impregnated carbons are available as well.

Removable Lid - HDPE lid with lever lock closure and poly-clad cellulose gasket.

Connections - Connections with straight 2" or 4" HDPE pipe to connect to using a sleeve and clamp connector to insure easy, durable and leak proof hookup to your system. Optional drains let you remove any accumulated condensate.

Flow Distributors - The 55 gallon barrel uses an air plenum chamber to insure even distribution of the airflow through the carbon.

Installation & Start Up - The General air pollution control barrel requires no special procedure for start up. Just connect the inlet and outlet to the treatment system and start it up. Multiple units are usually connected in series with testing advised between the units to determine when the first unit needs to be changed out.

Maintenance - Once connected, The General requires no maintenance other than the monitoring of the influent and effluent air streams and the operating pressure of the system. Monitoring the air stream into the last Air Pollution Control Barrel in series mode is a recommended safeguard against breakthrough in the final discharge. When the concentration of contaminants in the outflow equals the concentration in the inflow, The General has reached its removal capacity and should be removed from service. The working life of each adsorber is dependent upon the type of contaminant in the air as well as its concentration and the airflow rate. A pressure relief device is advised to prevent damage to the canister in the event of excessive pressure buildup.

Recharging The General - Once the carbon has reached its pollutant removal capacity, the unit should be removed and replaced with a fresh one. To purchase replacement carbon or to arrange for a carbon change out, please contact our office.

Disposal - Dispose of the spent carbon in accordance with Federal, State and Local regulations.

Caution!

Wet activated carbon removes oxygen from air causing a severe hazard to workers inside carbon vessels. Confined space / low oxygen procedures should be put in place before any entry is made. Such procedures should comply with all applicable local, state and federal guidelines.