AIR QUALITY ASSESSMENT

Armorlite Lofts Residential Development
GPA23-0002, R23-0001
SDP23-0003, CUP23-0002
City of San Marcos, CA

Prepared for:

City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069

Prepared By:

Ldn Consulting, Inc.
23811 Washington Ave, C110-333
Murrieta, CA 92562

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1.0 INTRODUCTION

1.1 Project Description

The project proposes up to 165 multi-family residential units within a five-story building situated on approximately 2.4 acres. The project would also include up to 5,600 square feet (SF) of retail/flex use. Additionally, the project proposes as many as 254 parking spaces which includes 13 Level 2 electric vehicle (EV) spaces, 62 EV ready spaces, and 25 EV capable spaces. The project seeks a General Plan Amendment (GPA) and to rezone the property from Public-Institutional (P-I) Specific Plan Area (SPA). Construction would be expected to start in 2026 and be completed in about one year. Full operations are expected in late 2027. The project development plan is shown in Figure 1-A.

1.2 Project Location

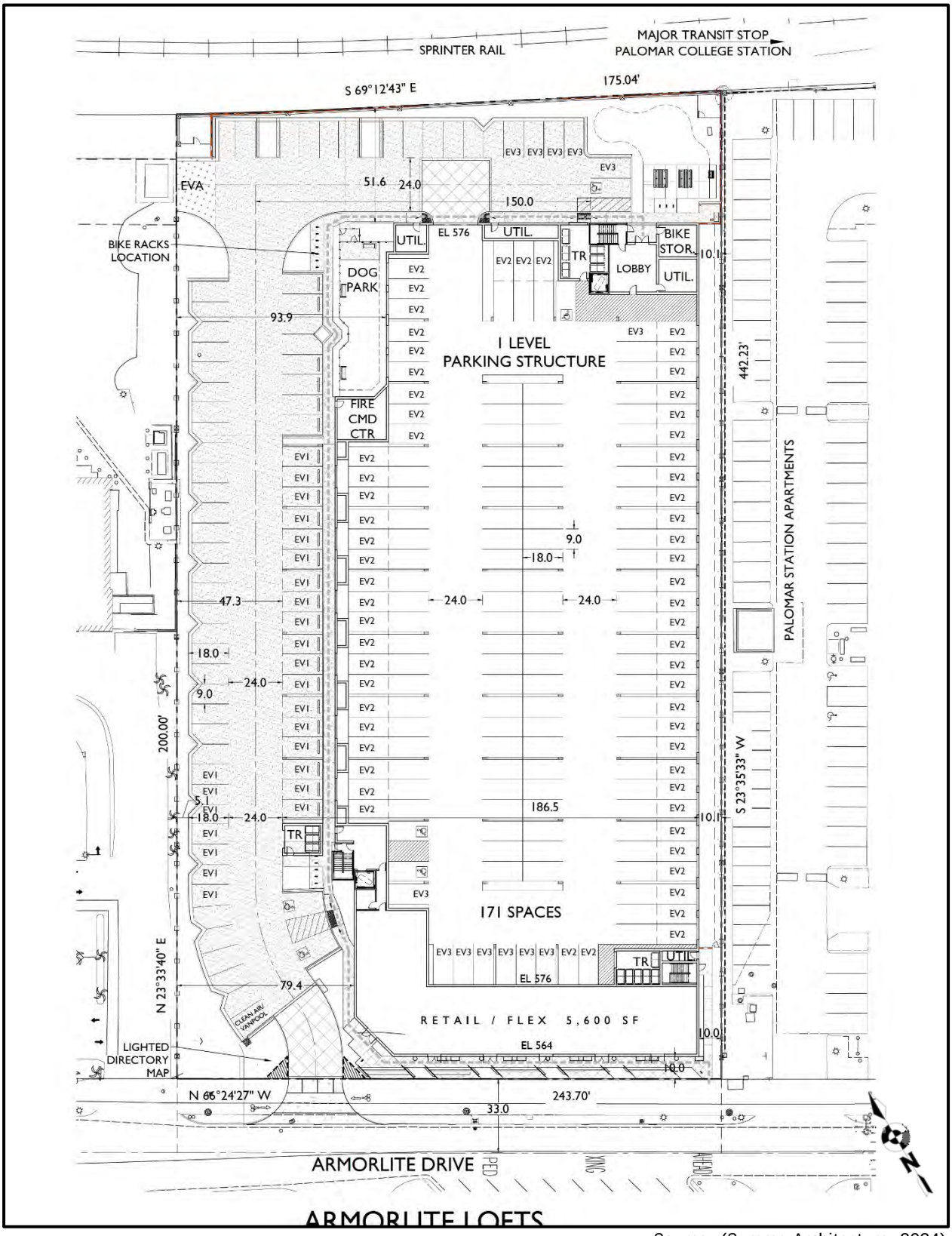
The vacant 2.4-acre project site having an Assessor Parcel Number (APN) of 219-612-62-00 is located along Armorlite Drive in the City of San Marcos. Specifically, the project site is located north of State Route 78 (SR-78) and east of Las Posas Road between W. Mission Road and Armorlite Drive. A project vicinity map and location map are shown in Figure 1-B.

The project would start grading in 2026 with residential construction to start shortly thereafter. Grading would consist of approximately 6,950 cubic yards (CY) of cut material and 4,400 CY of fill material. Based on discussions with the engineer, shrinkage would be expected and the total export expected would be approximately 2,250 CY of material. During grading, blasting may be required and if blasting is required, a standalone rock crusher similar to a Terex 4242SR 310 horsepower (HP)+/- will be utilized.

1.3 Purpose of this Study

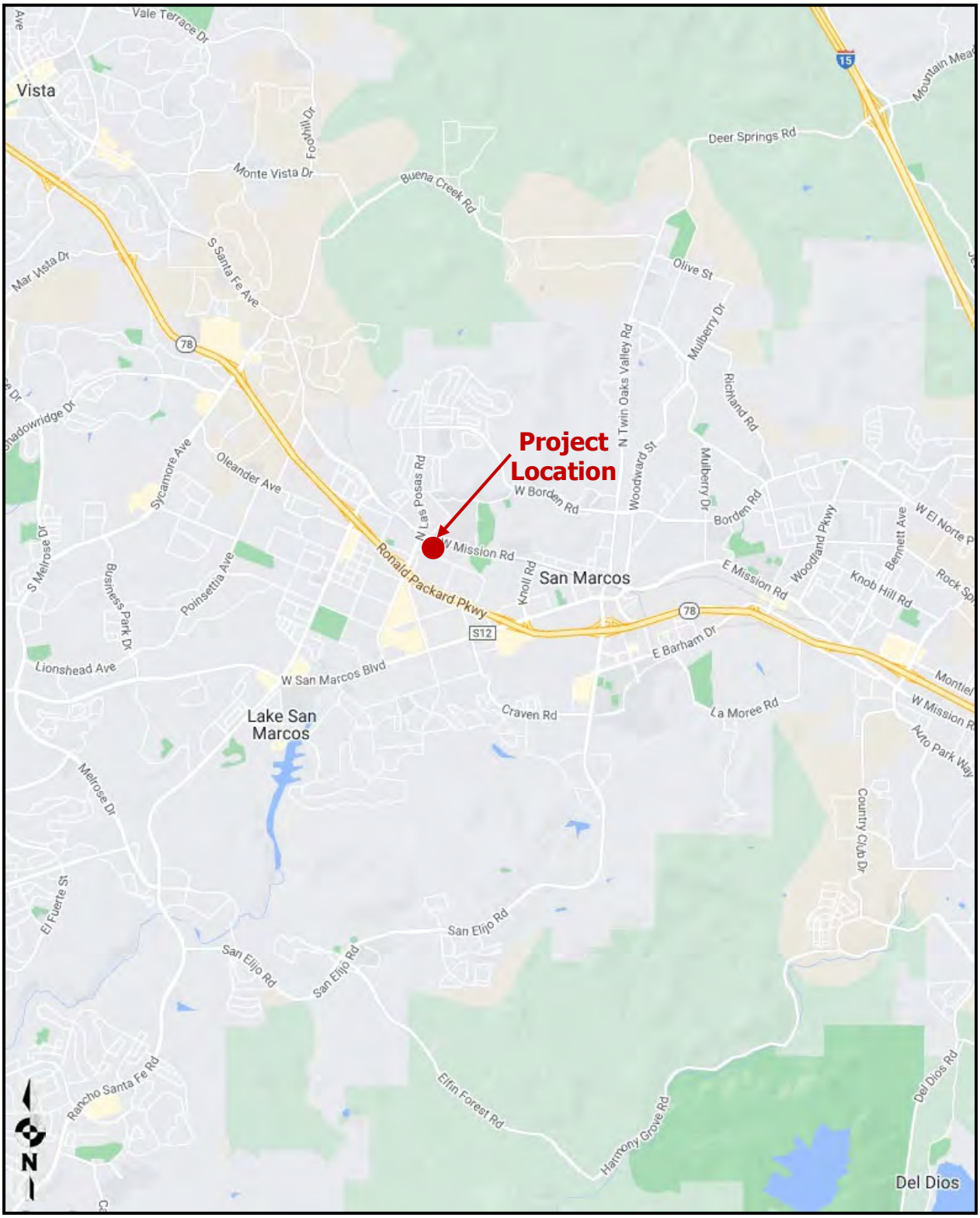
The purpose of this Air Quality study is to determine potential significant air quality impacts (if any) that may be generated by construction or operational emissions from the proposed project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant under the California Environmental Quality Act (CEQA).

Figure 1-A: Residential Development Details



Source: (Summa Architecture, 2024)

Figure 1-B: Project Vicinity Map



Source: (Google, 2023)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The existing site is currently vacant. The project is bounded by existing commercial and retail uses to the west, existing multi-family residential units to the east, W. Mission Road and the San Diego Northern Railroad (SDNR) to the north, and Armorlite Drive to the south. Existing multi-family residential units are located across Armorlite Drive to the south. Elevations onsite are approximately 575 feet above mean sea level. The existing site aerial map is shown in Figure 2-A.

Figure 2-A: Existing Site Layout

Source: (Google Earth Pro, 2023)

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure systems drop to the south and brings cooler, moister weather from the north.

Meteorological trends within the area generally show daytime highs ranging between 64ºF in the winter to approximately 88ºF in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 37ºF in the winter to approximately 59ºF in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2021). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits to protect public health which includes sensitive populations such as asthmatics, children, and elderly. ***Secondary Standards*** set limits to protect public welfare and include protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The Environmental Protection Agency's (EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards (NAAQS) for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below (EPA, 2022):

1. ***Carbon Monoxide (CO):*** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen*

present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen (EPA, 2022).

2. ***Lead (Pb):*** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children* (EPA, 2022).
3. ***Nitrogen Dioxide (NO_2):*** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_2 is usually visible as a reddish-brown air layer over urban areas. NO_2 along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children* (EPA, 2022).
4. ***Particulate Matter (PM_{10} or $PM_{2.5}$):*** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness* (EPA, 2022).
5. ***Ozone (O_3)****: Ozone at the ground level is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics* (EPA, 2022).

It should be noted that Oxides of Nitrogen (NO_x) is a family of poisonous, highly reactive gases. These gases form when fuel is burned at high temperatures. NO_x pollution is emitted

by automobiles, trucks and various non-road vehicles (e.g., construction equipment, boats, etc.) as well as industrial sources such as power plants, industrial boilers, cement kilns, and turbines. NO_x often appears as a brownish gas. It is a strong oxidizing agent and plays a major role in the atmospheric reactions with Volatile Organic Compounds (VOCs) which produces ozone on hot summer days (EPA, 2023).

6. ***Sulfur Dioxide (SO_2)**: is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality* (EPA, 2022).

2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality at the State level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS in that the State standards also restrict four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. ***Visibility Reducing Particles**: Particles in the Air that obstruct the visibility* (CARB, 2023).
2. ***Sulfates**: are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain* (CARB, 2023).
3. ***Hydrogen Sulfide (H_2S)**: is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death* (CARB, 2023).
4. ***Vinyl Chloride**: also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC)* (CARB, 2023).

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.070 ppm (137 µg/m3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		-		
Fine Particulate Matter (PM2.5)[9]	24 Hour	No Separate State Standard		35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	12.0 µg/m3	15 µg/m3	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		-	-	-
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO_2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method)[9]
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10] (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 13				
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the 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 EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3 , as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 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 SO2 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.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (California Air Resources Board, 05/04/2016)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard and many areas are in non-attainment for PM_{10} as well. California, therefore, created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within the County. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on VOCs and NO_X. Currently, San Diego is in "non-attainment" status for federal and state O_3 and state PM_{10} and $PM_{2.5.}$ An attainment plan is available for O_3. The RAQS was adopted in 1992 and has been updated as recently as 2022 which was the latest update incorporating minor changes to the prior 2016 update.

The 2022 update mostly summarizes how the 2016 update has lowered NO_X and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NO_X reduction measures. NO_X and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for the County is shown in Table 2.2 on the following page (SDAPCD, 2023).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the project produces unmitigable air quality emissions or if the project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment***
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

** The 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.*
*** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.*
****The California Air Resources Board (CARB) 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 PM2.5 standards, the data completeness requirements for state PM2.5 standards substantially exceed federal requirements and mandates, and have historically not been feasible for most air districts to adhere to given local resources. APCD has begun replacing most regional filter-based PM2.5 monitors as they reach the end of their useful life with continuous PM2.5 air monitors to ensure collected data meets stringent completeness requirements in the future. APCD 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.*
(SDAPCD, 2023)

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

A: Conflict with or obstruct implementation of the Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?

B: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (PM_{10}, $PM_{2.5}$ or exceed quantitative thresholds for O_3 precursors, oxides of nitrogen [NO_X] and Volatile Organic Compounds [VOCs])?

C: Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?

D: Result in other emission (such as those leading to odors) adversely affecting a substantial number of people?

2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources. These screening criteria can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not have a threshold for Volatile Organic Compounds (VOCs), it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 below.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Operational Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

Non-Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new,

relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk to between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the cancer risk to over 10 in one million. In addition, a project shall not generate either a chronic or acute health hazard index greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. Environmental Protection Agency (U.S. EPA) uses the term Volatile Organic Compounds (VOC) and the California Air Resources Board's (CARB's) Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term. However, for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because CalEEMod directly calculates ROG in place of VOC.

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. Table 2.4 identifies the criteria pollutants monitored at the aforementioned station.

SDAPCD published the five-year air quality summary for all of the monitoring stations within the San Diego basin (SDAPCD, 2022). The proposed development project is closest to the Camp Pendleton and Carmel Mountain Ranch Monitoring stations. Table 2.4 identifies the criteria pollutants monitored at the aforementioned stations.

Table 2.4: Two-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2021	2022	Days Exceeded over 2 years
O_3 (ppm)	Camp Pendleton or Carmel Mountain Ranch	1 Hour	0.09 ppm	No Standard	0.07	0.08	0
		8 Hour	0.070 ppm	0.070 ppm	0.06	0.07	0
PM_{10} (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	PM10 Data Not Available for Monitoring Sites near Project Site		
		Annual Arithmetic Mean	20 µg/m3	No Standard			
* $PM_{2.5}$ (µg/m^3)		24 Hour	No standard -	35 µg/m3	23.5	14.9	N/A
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	8.5	7.6	N/A
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.013	0.013	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.059	0.059	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	3.0	2.2	N/A
		8 Hour	9 ppm	9 ppm	1.8	1.2	N/A

Notes:
1. - Yearly maximums marked with "-" indicated data was not available for either monitoring station.
2. * Data was selected from the Carmel Mountain Ranch station which began in 2019. All other data presented was collected at the Camp Pendleton Monitoring Station.
3. SO_2 is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO_2 emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is 0.004 ppm and the most restrictive standard (CAAQS for SO_2) is 0.25 ppm.
Souce: (SDAPCD, 2022)

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the CalEEMod air quality model (Version 2022.1), which was developed by South Coast Air Quality Management District (SCAQMD). The CalEEMod input/output model is shown in ***Attachment A*** to this report.

The AERSCREEN dispersion model was used to determine the concentration TACs at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The AERSCREEN input/output file for the proposed project is shown in ***Attachment B*** at the end of this report. The worst case exhaust emissions generated from the project from construction equipment was utilized and calculated within the CalEEMod model.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 below (OEHHA, 2015).

Equation 1 $$Dose_{air}=C_{air}*(BR/BW)*A*EF*(1x10^{-6})$$

$Dose_{air}$	=	Dose through inhalation (mg/kg/d)
C_{air}	=	Concentration in air (µg/m^3) Annual average DPM concentration in µg/m^3 - AERSCREEN predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
$1x10^{-6}$	=	Milligrams to micrograms conversion (10^{-3} mg/ µg), cubic meters to liters conversion (10^{-3} m^3/l)

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors within the project models are provided in

Attachment C to this report. The worst case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015).

Equation 2 $$RISK_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

$RISK_{inh\text{-}res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

Office of Environmental Health Hazard Assessment (OEHHA) recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans. Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

It should be noted that for construction activities, the exposure duration would be over a short-term duration or a duration limited to the Construction Duration. Because of this, it is recommended that the risk assessment look at the exposure age group bins most affected during construction.

Chronic Non-Cancer risks are also known with respect to diesel particulate matter (DPM) and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, February 2015). Diesel Exhaust has a REL of 5 $\mu g/m^3$ and targets the respiratory system.

3.2 Construction Assumptions

The project would start grading sometime in 2026 with residential construction to start shortly thereafter. Grading would consist of approximately 6,950 CY of cut material and 4,400 CY of fill material. Based on discussions with the engineer, shrinkage would be expected and the total export expected would be approximately 2,250 CY of material. Assuming use of 15 CY trucks and 15 work days, this equates to approximately 10 truck trips per day. During grading,

blasting and rock crushing may be required. For this analysis it was assumed both blasting and crushing would be required. The rock crusher assumed to be used during blasting would be similar to the Terex 4242SR 310 HP unit and is further specified in ***Attachment D*** to this report.

Earthwork associated with grading within CalEEMod uses a "Grading Equipment Passes" methodology which has been approved by SCAQMD in consultation with building estimator references and is used as the basis of emission generation (CAPCOA, 2021). As a design feature, the project's construction contractor will utilize Tier IV rated diesel construction equipment to minimize diesel particulates from construction equipment. Table 3.1 below describes the construction equipment and durations.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Site Preparation	1/1/2026	1/5/2026	
Graders			1
Scrapers			1
Tractors/Loaders/Backhoes			1
Grading	1/4/2026	2/1/2026	
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2
Rock Crusher			1
Building Construction	2/2/2026	12/4/2026	
Cranes			1
Forklifts			2
Generator Sets			1
Tractors/Loaders/Backhoes			1
Welders			3
Paving	11/14/2026	11/27/2026	
Tractors/Loaders/Backhoes			1
Pavers			1
Paving Equipment			1
Rollers			2
Cement and Mortar Mixers			1
Architectural Coating	8/15/2026	12/4/2026	
Air Compressors			1

This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions provided by the project applicant.

The project is assumed to require some blasting and crushing during the earthwork/grading of the project site. During blasting operations, grading operations would temporarily stop and resume once blasting is completed. Per conversations with the project Civil Engineer, it is expected that each blast, limited to once a day, would also be limited to six tons of ammonium nitrate for any given blast operation. The area of each blast would be limited to 20,000 SF or (100-foot x 200-foot) area.

Blasting operations usually require a chemical material that is capable of extremely rapid combustion resulting in an explosion or detonation. These materials are usually mixtures of several ingredients but are often oxygen deficient as combustion reactions take place which causes a formation of carbon monoxide and to a lesser extent, nitrogen oxides. For ammonium nitrate and fuel oil (ANFO) mixtures it is expected that carbon monoxide would be generated in quantities of 67 pounds (lbs) per every ton of explosives and nitrogen oxides would be generated at 17 lbs per the same quantity as indicate in Table 13.3-1 of the EPA's AP-42: Compilation of Air Emissions Factors from Stationary Sources (EPA, 1980). Particulate matter will also be generated from blasting and can be estimated using Table 11.9-1 of the aforementioned document (EPA, 1998) using the following equation:

$$PM_{10}(lb/Blast) = 0.000014 * (BlastArea(ft^2)) * 0.52$$

3.3 Operational Emissions

Once construction is completed the proposed project would generate emissions from daily operations which would include sources such as Area, Energy and Mobile uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from uses such as onsite natural gas and electrical use. Mobile uses are from the expected project traffic trip generations. The operational model results are also shown in ***Attachment A*** at the end of this report.

The CalEEMod calculations include the following assumptions:

- The traffic inputs for CalEEMod were adjusted to be consistent with the proposed project traffic study. Based on that study, the proposed project would generate 1,214 net average daily trips (LL&G Engineers, 2023).
- Default trip distances within CalEEMod were utilized.
- It was assumed that an average of 10% of the structural surface area will be re-painted each year.
- Since the proposed project would not be installing hearth options, CalEEMod default hearth settings were modified to represent no hearth options.
- CalEEMod includes landscaping and consumer product assumptions which would apply to this project. Consumer product emissions are generated by a wide range of product

categories, including air fresheners, automotive products, household cleaners, and personal care products. Emissions associated with these products primarily depend on the increased population associated with residential development (512 residents).

3.4 Odor Impacts

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would not be considered a significant impact. Also, since the project is a residential / commercial retail development, a less than significant operational odor impact is expected. This is largely because the uses proposed by the project would not meet typical uses generating odors which CARB outlines in their Land Use Handbook which include:

- Sewage Treatment Plants
- Landfills
- Recycling Facilities
- Waste Transfer Stations
- Petroleum Refineries
- Biomass Operations
- Autobody Shops
- Coating Operations
- Fiberglass Manufacturing
- Foundries
- Rendering Plants
- Livestock Operations

4.0 FINDINGS

4.1 Construction Findings

The project would start grading in 2026 and all building construction would be completed by late 2027. The project would require export of approximately 2,250 CY of soil. The following design features were assumed within the CalEEMod analysis:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier IV.*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Table 4.1 shows the expected construction emissions. Based on the cumulative totals, Air Quality impacts would not be expected.

Table 4.1: Expected Construction Emissions Summary (Pounds/Day)

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2026	14.3	8.22	31.7	0.07	0.16	9.76	9.92	0.14	3.89	4.03
Blasting Emissions (calculations shown in text below)		102	402		20.59		20.59			
Construction Total w/ Blasting (Maximum)	14.3	110.22	433.7	0.07	20.75	9.76	30.51	0.14	3.89	4.03
Screening Level Threshold (lb/day)	**75**	**250**	**550**	**250**	**-**	**-**	**100**	**-**	**-**	**55**
SDAPCD Impact?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

During blasting operations, grading operations would stop and it is expected that each blast operation could require between 10,000 - 12,000 lbs of Ammonium Nitrate. The proposed project would utilize approximately 6 tons of ammonium nitrate per a blast which would generate up to 402 lbs (67 lbs/ton * 6 tons) of carbon monoxide and up to 102 lbs (17 lbs/ton * 6 tons) of nitrogen oxides during a blast utilizing 6 tons of ammonium nitrate. These quantities would be additive to the mass grading operations for the entire project site and

could be added to the worst-case mass grading daily CO and NO_x output. Additional particulates derived from each blast is estimated over a 20,000 SF area roughly 100-foot by 200-foot in dimension as identified in Section 3.2 above. Given this, it is estimated that each blast would generate 20.59 lb/blast as is shown in the equation below:

$$PM_{10}(lb/Blast) = 0.000014 * (20{,}000 ft^2)^{1.5} * 0.52 = 20.59(lb/blast)$$

It should be noted, a blasting permit is required from the San Marcos Fire Department which would include required terms and should limit the blasting material to 6 tons per day as this was indicated by the project Civil Engineer through communication as the expected blast charge. Since 6 tons per day is utilized, this would be a condition of approval.

4.2 Health Risk

Based upon the air quality modeling, worst-case onsite PM_{10} from onsite construction exhaust would cumulatively produce 0.006 tons over the construction duration (337-calendar days) or an average of $1.87x10^{-4}$ grams/second. Utilizing the AERSCREEN dispersion model, the peak maximum 1-hr concentration is 0.537 µg/m^3 during the worst-case construction period. Converting the peak 1-hr concentration to an annual concentration by multiplying it by 0.08 (US EPA, 1992) yields an annual concentration of 0.0429 µg/m^3. Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk is 6.04 per million over the construction duration. This risk would be expressed at the point of maximum exposure 50 meters away (164 feet) as predicted by AERSCREEN and shown in the model outputs provided within ***Attachment B***. As a condition of project approval, the project would be required to utilize Tier 4 diesel equipment. Since the threshold is 10 per million exposed with T-BACT installed, the project would have a less than significant impact and would be in compliance with the City's thresholds.

It should be noted that sensitive residential receptors are adjacent to the project site less than 100 feet from the eastern property line. Since the maximum risk is 6.04 per million exposed (and the threshold is 10 per million), all sensitive receptors would have cancer risks at or less than 6.04 per million exposed which would also represent a less than significant impact.

There are known chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this, we find that the hourly concentration of 0.537 µg/m^3 divided by the REL of 5 µg/m^3 yields a Health Hazard Index of 0.107, which is less than one. Therefore, based on thresholds for non-cancer risks in Section 3.1 above, non-cancer health risks are considered less than significant.

4.3 Odor Impact Findings

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would not be considered an impact. Also, the proposed project would not be expected to generate odors during operation since the project is a commercial/residential development. Odor impacts would be less than significant.

4.4 Operational Findings

The proposed project would generate 1,214 daily trips (LL&G Engineers, 2023) once the proposed project is fully operational. This assumption has been incorporated into the CalEEMod file. The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by CalEEMod and can be seen in Table 4.2.. Based upon these calculations, the proposed project would not generate operational air quality impacts.

Table 4.2: Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer Scenario						
Mobile Emission Estimates (Lb/Day)	4.52	2.82	29.7	0.07	6.30	1.63
Area Source Emission Estimates (Lb/Day)	5.20	0.12	12.90	< 0.005	0.01	0.01
Energy Emission Estimates (Lb/Day)	0.02	0.30	0.13	< 0.005	0.02	0.02
Total (Lb/Day)	**9.73**	**3.24**	**42.7**	**0.07**	**6.34**	**1.67**
Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Winter Scenario						
Mobile Emission Estimates (Lb/Day)	4.42	3.10	28.40	0.07	6.30	1.63
Area Source Emission Estimates (Lb/Day)	3.80	0	0	0	0	0
Energy Emission Estimates (Lb/Day)	0.02	0.30	0.13	< 0.005	0.02	0.02
Total (Lb/Day)	**8.24**	**3.40**	**28.50**	**0.07**	**6.33**	**1.66**
Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod Outputs from CalEEMod include rounding and may not add up exactly						

4.5 Cumulative Impacts

The proposed project seeks to construct a 165-unit multi-family residential facility and 5,600 SF of commercial use. The project seeks a GPA and to rezone the property from P-I to SPA for the proposed mixed-use development. The P-I land use is typically used for any type of public use, including schools, hospitals, civic centers etc. The allowable use onsite per the zoning could have a maximum floor area ratio (FAR) of 3.0. Based on this, any facility which could be constructed onsite would be limited to approximately 318,000 SF. Vehicular trip generation of public institutions like schools or hospitals would result in significantly more traffic than the 1,214 trips that the proposed project would generate and would therefore generate larger quantities of operational air quality emissions. Based on SANDAG's trip generation guide a hospital can generate as many as 25 trips per 1,000 SF or over 7,000 trips for a project of this size (SANDAG, 2002). Since the largest component of air quality emissions are typically derived from vehicular trips, development under the proposed project would be considered less intense.

Another potential use for the site could be to install a 160,000 SF data center or larger if multiple stories are constructed. Data centers are recognized as very high consumers of electrical energy. For example, a 413,000 SF data center in Santa Clara was found to consume 665,750 megawatt hours (MWH) or 1.61 MWH/SF/year (Ramboll Environ, 2016). Based on this, a 160,000 SF building would require at least 257,600 MWH annually. Based on modeling, the proposed project would only consume 907 MWH which is over 285 times less energy and significantly less intense from an energy usage standpoint and though electrical energy isn't directly estimated in this air quality analysis, a reduction in energy would generate fewer offsite air quality emissions which could be expected within the utility provider's electrical generation.

Finally, cumulative construction impact could be expected if construction of the proposed project and potentially a hypothetical project in the immediate vicinity. An impact would exist if the cumulative totals of both projects when added together exceed the screening significance thresholds. Based on discussions with the applicant, no large construction projects are expected to occur simultaneously and within the immediate vicinity to the proposed project. Because of this, a less than significant cumulative construction impact would be expected.

Given this, the site development plan would be less intense in terms of air quality than would otherwise be allowed within the P-I General Plan land use. Therefore, the project would not conflict with the RAQS or the State's air quality SIP.

4.6 Conclusion of Findings

During construction of the proposed project, fugitive dust emissions would be expected during grading and equipment usage. However, these emissions would not exceed City thresholds and would not be considered an impact. In addition, the project was found to have less than significant odor and health risks during construction. Finally, since no significant construction projects are expected near the project site, cumulative construction impacts would be considered less than significant.

The project has been designed and planned by incorporating design elements and best management practices which are a condition of approval to the project as shown below:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier IV.*
- *Blasting would be limited to 6 tons of blast explosives per day.*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Additionally, emissions would be generated from project operations which include mobile, energy, and area sources. Significant impacts are not expected during operations. This analysis assumes the project would not install hearth options within the development.

Operational impacts were also estimated and were found to be less than significant. In addition, since the residential/commercial development would not be expected to generate operational odors and a less than significant odor impacts are expected during operations.

The proposed project seeks to construct a 165-unit multi-family residential facility with 5,600 SF of retail (1,214 ADT). The existing site allows for up to 318,000 SF of public facilities, such as a school, hospital, or civic center per the General Plan, or a 160,000 SF data center, which could consume up to 285 times more energy than the proposed project. These uses, allowed under the current General Plan designation, could generate significantly more air quality emissions than the proposed project but would still be consistent with the P-I zoning category. Therefore, the proposed project is considered less intense. Consequently, the SPA development plan would be less intense than what is allowed under the current zoning as defined by the General Plan. This means the project would not conflict with the County's Regional RAQS or the State's air quality SIP. Since no direct impacts are expected, the project would not generate cumulative operational impacts.

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ATTACHMENT A

CalEEMod

Armorlite Lofts Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Armorlite Lofts
Construction Start Date	1/1/2025
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	20.4
Location	225 N Las Posas Rd, San Marcos, CA 92069, USA
County	San Diego
City	San Marcos
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6297
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.21

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

Apartments Mid Rise	165	Dwelling Unit	1.00	158,400	0.25	—	512	—
Strip Mall	5.60	1000sqft	0.44	5,600	0.25	—	—	—
Enclosed Parking with Elevator	189	Space	0.50	75,600	0.25	—	—	—
Parking Lot	65.0	Space	0.50	0.00	0.25	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.8	6.29	22.1	0.03	0.08	1.74	1.82	0.08	0.42	0.49	—	4,794	4,794	0.20	0.19	4,863
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.3	8.22	31.8	0.07	0.16	9.78	9.94	0.14	3.89	4.03	—	8,831	8,831	0.39	0.61	9,022
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.37	3.60	13.2	0.02	0.04	1.37	1.41	0.04	0.42	0.46	—	2,942	2,942	0.13	0.12	2,984
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.61	0.66	2.41	< 0.005	0.01	0.25	0.26	0.01	0.08	0.08	—	487	487	0.02	0.02	494

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	13.8	6.29	22.1	0.03	0.08	1.74	1.82	0.08	0.42	0.49	—	4,794	4,794	0.20	0.19	4,863
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	14.3	8.22	31.8	0.07	0.16	9.78	9.94	0.14	3.89	4.03	—	8,831	8,831	0.39	0.61	9,022
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.37	3.60	13.2	0.02	0.04	1.37	1.41	0.04	0.42	0.46	—	2,942	2,942	0.13	0.12	2,984
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.61	0.66	2.41	< 0.005	0.01	0.25	0.26	0.01	0.08	0.08	—	487	487	0.02	0.02	494

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.73	3.24	42.7	0.07	0.09	6.25	6.34	0.08	1.58	1.67	88.2	7,746	7,834	9.32	0.32	8,186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.24	3.40	28.5	0.07	0.08	6.25	6.33	0.07	1.58	1.66	88.2	7,389	7,477	9.34	0.34	7,814
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	8.87	3.41	34.7	0.07	0.08	6.17	6.25	0.08	1.56	1.64	88.2	7,456	7,544	9.34	0.34	7,889
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.62	0.62	6.34	0.01	0.02	1.13	1.14	0.01	0.29	0.30	14.6	1,234	1,249	1.55	0.06	1,306

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.52	2.82	29.7	0.07	0.05	6.25	6.30	0.05	1.58	1.63	—	7,207	7,207	0.35	0.28	7,322
Area	5.20	0.12	12.9	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	39.6	39.6	< 0.005	< 0.005	39.7
Energy	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	494	494	0.12	0.01	500
Water	—	—	—	—	—	—	—	—	—	—	11.9	5.22	17.1	1.22	0.03	56.5
Waste	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.63	0.00	267
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.17
Total	9.73	3.24	42.7	0.07	0.09	6.25	6.34	0.08	1.58	1.67	88.2	7,746	7,834	9.32	0.32	8,186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.42	3.10	28.4	0.07	0.05	6.25	6.30	0.05	1.58	1.63	—	6,889	6,889	0.38	0.30	6,989
Area	3.80	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	494	494	0.12	0.01	500
Water	—	—	—	—	—	—	—	—	—	—	11.9	5.22	17.1	1.22	0.03	56.5
Waste	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.63	0.00	267
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.17
Total	8.24	3.40	28.5	0.07	0.08	6.25	6.33	0.07	1.58	1.66	88.2	7,389	7,477	9.34	0.34	7,814

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.37	3.05	28.2	0.07	0.05	6.17	6.22	0.05	1.56	1.61	—	6,937	6,937	0.37	0.30	7,044
Area	4.49	0.06	6.36	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	19.5	19.5	< 0.005	< 0.005	19.6
Energy	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	494	494	0.12	0.01	500
Water	—	—	—	—	—	—	—	—	—	—	11.9	5.22	17.1	1.22	0.03	56.5
Waste	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.63	0.00	267
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.17
Total	8.87	3.41	34.7	0.07	0.08	6.17	6.25	0.08	1.56	1.64	88.2	7,456	7,544	9.34	0.34	7,889
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.80	0.56	5.15	0.01	0.01	1.13	1.14	0.01	0.29	0.29	—	1,149	1,149	0.06	0.05	1,166
Area	0.82	0.01	1.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.23	3.23	< 0.005	< 0.005	3.24
Energy	< 0.005	0.06	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	81.8	81.8	0.02	< 0.005	82.8
Water	—	—	—	—	—	—	—	—	—	—	1.97	0.87	2.84	0.20	< 0.005	9.36
Waste	—	—	—	—	—	—	—	—	—	—	12.6	0.00	12.6	1.26	0.00	44.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19
Total	1.62	0.62	6.34	0.01	0.02	1.13	1.14	0.01	0.29	0.30	14.6	1,234	1,249	1.55	0.06	1,306

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	1.33	15.0	0.03	0.05	—	0.05	0.05	—	0.05	—	2,716	2,716	0.11	0.02	2,725
Dust From Material Movement	—	—	—	—	—	1.61	1.61	—	0.17	0.17	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.3	22.3	< 0.005	< 0.005	22.4
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.70	3.70	< 0.005	< 0.005	3.71
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.29	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	65.8	65.8	< 0.005	< 0.005	66.7

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
Hauling	0.06	3.92	1.46	0.02	0.06	0.77	0.83	0.04	0.21	0.25	—	2,932	2,932	0.15	0.47	3,076
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	0.55
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
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.1	24.1	< 0.005	< 0.005	25.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	0.09
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
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.99	3.99	< 0.005	< 0.005	4.19

3.3. Grading (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	1.20	14.2	0.02	0.05	—	0.05	0.05	—	0.05	—	2,455	2,455	0.10	0.02	2,463
Dust From Material Movement	—	—	—	—	—	7.09	7.09	—	3.43	3.43	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.07	0.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	135	135	0.01	< 0.005	135
Dust From Material Movement	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.3	22.3	< 0.005	< 0.005	22.3
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.48	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	110	110	0.01	< 0.005	111
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
Hauling	0.01	0.74	0.28	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	552	552	0.03	0.09	580
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.07	6.07	< 0.005	< 0.005	6.16
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
Hauling	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.3	30.3	< 0.005	< 0.005	31.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.00	1.00	< 0.005	< 0.005	1.02

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
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.01	5.01	< 0.005	< 0.005	5.26

3.5. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	3.74	12.8	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	3.74	12.8	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	2.25	7.69	0.01	0.02	—	0.02	0.02	—	0.02	—	1,327	1,327	0.05	0.01	1,331
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.41	1.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	220	220	0.01	< 0.005	220
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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.42	6.59	0.00	0.00	1.29	1.29	0.00	0.30	0.30	—	1,416	1,416	0.07	0.05	1,438
Vendor	0.03	0.98	0.46	0.01	0.01	0.20	0.21	0.01	0.05	0.07	—	760	760	0.03	0.11	795
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.48	5.81	0.00	0.00	1.29	1.29	0.00	0.30	0.30	—	1,337	1,337	0.07	0.05	1,355
Vendor	0.02	1.02	0.47	0.01	0.01	0.20	0.21	0.01	0.05	0.07	—	761	761	0.03	0.11	794
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.28	3.54	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	813	813	0.04	0.03	825
Vendor	0.02	0.61	0.28	< 0.005	0.01	0.12	0.12	0.01	0.03	0.04	—	458	458	0.02	0.07	479
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.65	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	135	135	0.01	0.01	137
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	75.9	75.9	< 0.005	0.01	79.3
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

3.7. Paving (2026) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.77	8.32	0.01	0.02	—	0.02	0.02	—	0.02	—	1,244	1,244	0.05	0.01	1,248
Paving	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34.1	34.1	< 0.005	< 0.005	34.2
Paving	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.64	5.64	< 0.005	< 0.005	5.66
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	0.01	0.01	133
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.64	3.64	< 0.005	< 0.005	3.69
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	0.61
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
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

3.9. Architectural Coating (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	12.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	134
Architectural Coatings	12.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.23	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.3	29.3	< 0.005	< 0.005	29.4
Architectural Coatings	2.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.84	4.84	< 0.005	< 0.005	4.86
Architectural Coatings	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.08	1.32	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	283	283	0.01	0.01	288
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	1.16	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	267	267	0.01	0.01	271
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.26	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	59.1	59.1	< 0.005	< 0.005	60.0

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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.79	9.79	< 0.005	< 0.005	9.94
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
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

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	3.65	2.23	23.4	0.06	0.04	4.88	4.93	0.04	1.24	1.28	—	5,642	5,642	0.28	0.22	5,732
Strip Mall	0.87	0.59	6.26	0.02	0.01	1.36	1.37	0.01	0.35	0.36	—	1,565	1,565	0.07	0.06	1,590
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	4.52	2.82	29.7	0.07	0.05	6.25	6.30	0.05	1.58	1.63	—	7,207	7,207	0.35	0.28	7,322
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartment Mid Rise	3.57	2.45	22.4	0.05	0.04	4.88	4.93	0.04	1.24	1.28	—	5,393	5,393	0.30	0.24	5,472
Strip Mall	0.85	0.65	5.91	0.01	0.01	1.36	1.37	0.01	0.35	0.36	—	1,496	1,496	0.08	0.06	1,517
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	4.42	3.10	28.4	0.07	0.05	6.25	6.30	0.05	1.58	1.63	—	6,889	6,889	0.38	0.30	6,989
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.64	0.44	4.08	0.01	0.01	0.88	0.89	0.01	0.22	0.23	—	899	899	0.05	0.04	913
Strip Mall	0.15	0.12	1.08	< 0.005	< 0.005	0.25	0.25	< 0.005	0.06	0.06	—	249	249	0.01	0.01	253
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.80	0.56	5.15	0.01	0.01	1.13	1.14	0.01	0.29	0.29	—	1,149	1,149	0.06	0.05	1,166

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	69.1	69.1	0.05	0.01	72.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	6.10	6.10	< 0.005	< 0.005	6.37
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	34.5	34.5	0.03	< 0.005	36.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	2.36	2.36	< 0.005	< 0.005	2.46
Total	—	—	—	—	—	—	—	—	—	—	—	112	112	0.08	0.01	117
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	69.1	69.1	0.05	0.01	72.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	6.10	6.10	< 0.005	< 0.005	6.37
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	34.5	34.5	0.03	< 0.005	36.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	2.36	2.36	< 0.005	< 0.005	2.46
Total	—	—	—	—	—	—	—	—	—	—	—	112	112	0.08	0.01	117
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	11.4	11.4	0.01	< 0.005	12.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.01	1.01	< 0.005	< 0.005	1.05
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	5.71	5.71	< 0.005	< 0.005	5.96

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.39	0.39	< 0.005	< 0.005	0.41
Total	—	—	—	—	—	—	—	—	—	—	—	18.6	18.6	0.01	< 0.005	19.4

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.02	0.29	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	374	374	0.03	< 0.005	375
Strip Mall	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.77	7.77	< 0.005	< 0.005	7.79
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	382	382	0.03	< 0.005	383
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.02	0.29	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	374	374	0.03	< 0.005	375
Strip Mall	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.77	7.77	< 0.005	< 0.005	7.79
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00

Total	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	382	382	0.03	< 0.005	383
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	62.0	62.0	0.01	< 0.005	62.1
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.29	1.29	< 0.005	< 0.005	1.29
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.06	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	63.3	63.3	0.01	< 0.005	63.4

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.40	0.12	12.9	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.6	39.6	< 0.005	< 0.005	39.7
Total	5.20	0.12	12.9	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	39.6	39.6	< 0.005	< 0.005	39.7

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	3.80	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.64	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.13	0.01	1.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.23	3.23	< 0.005	< 0.005	3.24
Total	0.82	0.01	1.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.23	3.23	< 0.005	< 0.005	3.24

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	11.1	4.88	16.0	1.14	0.03	52.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.79	0.35	1.14	0.08	< 0.005	3.77
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	11.9	5.22	17.1	1.22	0.03	56.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	11.1	4.88	16.0	1.14	0.03	52.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.79	0.35	1.14	0.08	< 0.005	3.77
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	11.9	5.22	17.1	1.22	0.03	56.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1.84	0.81	2.65	0.19	< 0.005	8.73
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.13	0.06	0.19	0.01	< 0.005	0.62
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	1.97	0.87	2.84	0.20	< 0.005	9.36

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	73.1	0.00	73.1	7.31	0.00	256
Strip Mall	—	—	—	—	—	—	—	—	—	—	3.17	0.00	3.17	0.32	0.00	11.1
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.63	0.00	267
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	73.1	0.00	73.1	7.31	0.00	256
Strip Mall	—	—	—	—	—	—	—	—	—	—	3.17	0.00	3.17	0.32	0.00	11.1

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.63	0.00	267
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	12.1	0.00	12.1	1.21	0.00	42.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	1.84
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	12.6	0.00	12.6	1.26	0.00	44.2

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.13
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.17

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.13
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.17
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	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
Site Preparation	Site Preparation	1/1/2026	1/5/2026	5.00	3.00	—
Grading	Grading	1/4/2026	2/1/2026	5.00	20.0	—
Building Construction	Building Construction	2/2/2026	12/4/2026	5.00	220	—
Paving	Paving	11/14/2026	11/27/2026	5.00	10.0	—
Architectural Coating	Architectural Coating	8/15/2026	12/04/2026	5.00	80.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Tier 4 Final	1.00	8.00	423	0.48

Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	7.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	7.00	84.0	0.37
Grading	Crushing/Proc. Equipment	Diesel	Tier 4 Final	1.00	6.00	310	0.41
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Final	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Final	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Tier 4 Final	1.00	8.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Tier 4 Interim	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
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT

Site Preparation	Hauling	41.7	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	12.5	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	7.85	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	152	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	30.9	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	30.5	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	320,760	106,920	9,380	2,909	2,614

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	1,000	4.50	0.00	—
Grading	—	1,250	5.00	0.00	—
Paving	0.00	0.00	0.00	0.00	1.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	0.50	100%
Parking Lot	0.50	100%

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	45.1	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
Apartments Mid Rise	990	990	990	361,350	6,916	6,916	6,916	2,524,178
Strip Mall	224	224	224	81,760	1,930	1,930	1,930	704,309
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	165
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)
320760	106,920	9,380	2,909	2,614

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)
Apartments Mid Rise	559,494	45.1	0.0330	0.0040	1,167,942
Strip Mall	49,362	45.1	0.0330	0.0040	24,234
Enclosed Parking with Elevator	279,072	45.1	0.0330	0.0040	0.00
Parking Lot	19,079	45.1	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	5,796,957	4.57
Strip Mall	414,806	3.74
Enclosed Parking with Elevator	0.00	3.74

Parking Lot	0.00	3.74

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	136	—
Strip Mall	5.88	—
Enclosed Parking with Elevator	0.00	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.0	annual days of extreme heat
Extreme Precipitation	3.95	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	7.44	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	42.6
AQ-PM	28.1
AQ-DPM	76.8
Drinking Water	24.2
Lead Risk Housing	39.5
Pesticides	35.7
Toxic Releases	27.8
Traffic	61.5
Effect Indicators	—
CleanUp Sites	78.6
Groundwater	67.5
Haz Waste Facilities/Generators	82.7
Impaired Water Bodies	43.8
Solid Waste	96.6
Sensitive Population	—
Asthma	3.22
Cardio-vascular	14.1
Low Birth Weights	40.5
Socioeconomic Factor Indicators	—
Education	78.3
Housing	82.8

Linguistic	77.9
Poverty	78.2
Unemployment	36.4

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	14.57718465
Employed	17.95200821
Median HI	15.05196972
Education	—
Bachelor's or higher	34.96727833
High school enrollment	100
Preschool enrollment	1.873476197
Transportation	—
Auto Access	7.878865649
Active commuting	68.52303349
Social	—
2-parent households	81.04709355
Voting	41.66559733
Neighborhood	—
Alcohol availability	17.16925446
Park access	56.96137559
Retail density	84.51174131
Supermarket access	77.74926216
Tree canopy	38.40626203

Housing	—
Homeownership	8.623123316
Housing habitability	19.36353137
Low-inc homeowner severe housing cost burden	79.81521879
Low-inc renter severe housing cost burden	64.18580778
Uncrowded housing	31.19466188
Health Outcomes	—
Insured adults	5.902733222
Arthritis	9.2
Asthma ER Admissions	99.1
High Blood Pressure	21.8
Cancer (excluding skin)	21.2
Asthma	30.0
Coronary Heart Disease	3.1
Chronic Obstructive Pulmonary Disease	5.5
Diagnosed Diabetes	18.3
Life Expectancy at Birth	13.9
Cognitively Disabled	11.9
Physically Disabled	7.5
Heart Attack ER Admissions	99.6
Mental Health Not Good	25.4
Chronic Kidney Disease	2.7
Obesity	34.9
Pedestrian Injuries	81.7
Physical Health Not Good	17.6
Stroke	5.6
Health Risk Behaviors	—

Binge Drinking	68.3
Current Smoker	35.6
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	16.3
Elderly	23.2
English Speaking	15.1
Foreign-born	80.3
Outdoor Workers	11.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	47.4
Traffic Density	77.2
Traffic Access	23.0
Other Indices	—
Hardship	72.9
Other Decision Support	—
2016 Voting	49.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	59.0
Healthy Places Index Score for Project Location (b)	15.0
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	Total Area is 2.44 acres - 254 Parking Spaces
Construction: Construction Phases	Estimated Construction Schedule
Construction: Off-Road Equipment	Design Feature to use Tier 4 final equipment
Operations: Vehicle Data	Updated to reflect the TS
Operations: Hearths	no hearth options installed
Construction: Off-Road Equipment EF	crusher equipment similar to scraper equipment and was updated since no defaults were provided by CalEEMod
Construction: Dust From Material Movement	Updated to reflect PD

ATTACHMENT B

AERSCREEN for PM_{10} Exhaust

TITLE: AMORLITE LOFTS

********** AREA PARAMETERS **********

SOURCE EMISSION RATE:	0.187E-03 g/s	0.148E-02 lb/hr
AREA EMISSION RATE:	0.215E-07 g/(s-m2)	0.170E-06 lb/(hr-m2)
AREA HEIGHT:	3.00 meters	9.84 feet
AREA SOURCE LONG SIDE:	93.36 meters	306.30 feet
AREA SOURCE SHORT SIDE:	93.36 meters	306.30 feet
INITIAL VERTICAL DIMENSION:	1.00 meters	3.28 feet
RURAL OR URBAN:	URBAN	
POPULATION:	79000	
INITIAL PROBE DISTANCE =	5000. meters	16404. feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********
25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	0.5371	25	50.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	10	10	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

********** AERSCREEN AUTOMATED DISTANCES **********

OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.3847	2524.99	0.4163E-02
25.00	0.4690	2550.00	0.4107E-02
50.00	0.5371	2575.00	0.4053E-02
75.00	0.4554	2600.00	0.4000E-02
100.00	0.2963	2625.00	0.3948E-02
125.00	0.2174	2650.00	0.3897E-02
150.01	0.1718	2675.00	0.3847E-02
174.99	0.1415	2700.00	0.3798E-02
200.00	0.1196	2725.00	0.3751E-02
225.00	0.1031	2750.00	0.3704E-02
250.00	0.9021E-01	2775.00	0.3658E-02
274.99	0.7992E-01	2800.00	0.3614E-02
300.00	0.7147E-01	2824.99	0.3570E-02
325.00	0.6447E-01	2850.00	0.3527E-02
350.00	0.5858E-01	2875.00	0.3485E-02
375.01	0.5355E-01	2900.00	0.3444E-02
400.00	0.4923E-01	2925.00	0.3404E-02
425.00	0.4548E-01	2950.00	0.3365E-02
450.00	0.4220E-01	2975.00	0.3326E-02
475.01	0.3929E-01	3000.00	0.3288E-02
500.00	0.3672E-01	3025.00	0.3251E-02
525.00	0.3444E-01	3050.00	0.3215E-02
550.00	0.3238E-01	3074.99	0.3179E-02
575.00	0.3052E-01	3100.00	0.3144E-02
600.00	0.2884E-01	3125.00	0.3109E-02
625.00	0.2731E-01	3150.00	0.3076E-02
650.00	0.2593E-01	3174.99	0.3043E-02
675.00	0.2465E-01	3199.99	0.3010E-02
700.00	0.2349E-01	3225.00	0.2978E-02
725.00	0.2241E-01	3250.00	0.2947E-02
750.00	0.2141E-01	3275.00	0.2916E-02
775.00	0.2049E-01	3300.00	0.2886E-02
800.00	0.1964E-01	3325.00	0.2856E-02
825.00	0.1885E-01	3350.00	0.2827E-02
850.00	0.1811E-01	3375.00	0.2799E-02
875.00	0.1741E-01	3400.00	0.2770E-02
900.00	0.1676E-01	3425.00	0.2743E-02
924.99	0.1616E-01	3450.00	0.2716E-02
950.00	0.1559E-01	3475.00	0.2689E-02

975.00	0.1506E-01	3500.00	0.2663E-02
1000.00	0.1455E-01	3525.00	0.2637E-02
1025.00	0.1407E-01	3550.00	0.2612E-02
1050.00	0.1362E-01	3575.00	0.2587E-02
1075.00	0.1319E-01	3600.00	0.2562E-02
1100.00	0.1279E-01	3625.00	0.2538E-02
1125.01	0.1241E-01	3650.00	0.2514E-02
1150.00	0.1204E-01	3675.00	0.2491E-02
1175.00	0.1170E-01	3700.00	0.2468E-02
1200.00	0.1137E-01	3725.00	0.2445E-02
1225.00	0.1106E-01	3750.00	0.2423E-02
1250.00	0.1076E-01	3775.00	0.2401E-02
1275.00	0.1047E-01	3800.00	0.2379E-02
1300.00	0.1020E-01	3825.00	0.2358E-02
1325.00	0.9941E-02	3850.00	0.2337E-02
1350.01	0.9693E-02	3875.00	0.2317E-02
1375.00	0.9456E-02	3900.00	0.2296E-02
1400.00	0.9228E-02	3925.00	0.2276E-02
1425.00	0.9010E-02	3950.00	0.2257E-02
1450.00	0.8801E-02	3975.00	0.2237E-02
1475.00	0.8600E-02	4000.00	0.2218E-02
1500.00	0.8406E-02	4025.00	0.2199E-02
1525.00	0.8219E-02	4050.00	0.2181E-02
1550.00	0.8039E-02	4075.00	0.2162E-02
1575.00	0.7866E-02	4100.00	0.2144E-02
1600.00	0.7778E-02	4125.00	0.2127E-02
1625.00	0.7615E-02	4150.00	0.2109E-02
1650.00	0.7457E-02	4175.00	0.2092E-02
1675.00	0.7305E-02	4200.00	0.2075E-02
1700.00	0.7158E-02	4225.00	0.2058E-02
1725.00	0.7016E-02	4250.00	0.2042E-02
1750.00	0.6879E-02	4275.00	0.2025E-02
1775.00	0.6747E-02	4300.00	0.2009E-02
1800.00	0.6619E-02	4325.00	0.1993E-02
1825.00	0.6495E-02	4350.00	0.1978E-02
1850.00	0.6375E-02	4375.00	0.1962E-02
1875.00	0.6259E-02	4400.00	0.1947E-02
1900.00	0.6146E-02	4425.00	0.1932E-02
1924.99	0.6037E-02	4450.00	0.1917E-02
1950.00	0.5931E-02	4475.00	0.1902E-02
1975.00	0.5828E-02	4500.00	0.1888E-02
2000.00	0.5729E-02	4525.00	0.1874E-02
2025.00	0.5632E-02	4550.00	0.1860E-02
2050.00	0.5538E-02	4575.00	0.1846E-02
2075.00	0.5447E-02	4600.00	0.1832E-02
2100.00	0.5359E-02	4625.00	0.1819E-02
2124.99	0.5272E-02	4650.00	0.1805E-02
2150.00	0.5189E-02	4675.00	0.1792E-02
2175.00	0.5107E-02	4700.00	0.1779E-02
2200.00	0.5028E-02	4725.00	0.1766E-02
2225.00	0.4951E-02	4750.00	0.1753E-02
2250.00	0.4875E-02	4775.00	0.1741E-02
2275.00	0.4802E-02	4800.00	0.1729E-02
2300.00	0.4731E-02	4825.00	0.1716E-02
2325.00	0.4661E-02	4850.00	0.1704E-02
2350.00	0.4593E-02	4875.00	0.1692E-02
2375.00	0.4527E-02	4900.00	0.1680E-02
2399.99	0.4463E-02	4925.00	0.1669E-02
2424.99	0.4400E-02	4950.00	0.1657E-02
2449.99	0.4339E-02	4975.00	0.1646E-02
2475.00	0.4279E-02	5000.00	0.1635E-02
2500.00	0.4220E-02		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.5398	0.5398	0.5398	0.5398	N/A

DISTANCE FROM SOURCE 51.00 meters

IMPACT AT THE AMBIENT BOUNDARY	0.3847	0.3847	0.3847	0.3847	N/A

DISTANCE FROM SOURCE 1.00 meters

ATTACHMENT C

Cancer Risk Calculations

Air Quality Health Risk Calculations (Worst-Case)
165 Unit Multi-Family w/ 5600 SF Retail (PDF Tier 4)

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.006**					
	Construction Start	**1/1/2026**					
	Construction Complete	**12/4/2026**	1.60E-02				
	Days	**337**					
	Construction Emission per day (lb/day)	**0.035608309**					
	Annual Duration (Days)	**365**					
	Annualized Emission Rate (Grams/Second)	**1.87E-04**					
	Project Site Size (Acres)	**2.44**					
	Project Site Size (meters^2)	**9874.329671**					
	Length of Smalles Side (meters)	**99.36966172**					
Used as an input to AERSCREEN	Emission Rate over Grading Area(g/s-m^2)	**1.89E-08**					
From AERSCREEN*0.08	Concentration Annual (Ug/M^3)	**0.042968**					
		Days	Days to years				
Duration		337	0.923287671				
Age (Years)		3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15		0.042968	0.042968	0.042968	0.042968	0.042968	0.042968
Breathing Rate per agegroup BR/BW (Page 5-25)		361	1090	861	745	335	290
A (Default is 1)		1	1	1	1	1	1
Exposure Frequency = EF (days/365days)		0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3		0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh		0.00001489	0.00004496	0.00003552	0.00003073	0.00001382	0.00001196
Construction Days		337	0.923287671				
potency factor for Diesel		1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor		10	10	3	3	1	1
ED		0.25	0.923287671	0.923287671	0.923287671	0.923287671	0.923287671
AT		70	70	70	70	70	70
FAH		0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group		4.97253E-07	5.5449E-06	1.11303E-06	9.6307E-07	1.46358E-07	1.26698E-07
Risk per million Exposed		0.497252704	5.544896928	1.113025096	0.963070495	0.146357749	0.126697753
Cancer Risk Over Construction Duration		6.04					

Air Quality Health Risk Calculations (Worst-Case)
Greens Storage with Tier 4 PDF with DPF

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.0044**
	Construction Start	**6/1/2023**
	Construction Complete	**4/16/2024**
	Days	**320**
	Construction Emission per day (lb/day)	**0.0275**
	Annual Duration (Days)	**365**
	Annualized Emission Rate (Grams/Second)	**0.000144**
	Project Site Size (Acres)	**2.51**
	Project Site Size (meters^2)	**10157.60962**
	Length of Smalles Side (meters)	**100.7849672**
Used as an input to AERSCREEN	Emission Rate over Grading Area(g/s-m^2)	**1.42E-08**
From AERSCREEN*0.08	Concentration Annual (Ug/M^3)	**0.02792**

	Days	Days to years					
Duration	320	0.876712329					
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70	
Cair (annual) - From F15	0.02792	0.02792	0.02792	0.02792	0.02792	0.02792	
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290	
A (Default is 1)	1	1	1	1	1	1	
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96	
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	
Dose-inh	0.00000968	0.00002922	0.00002308	0.00001997	0.00000898	0.00000777	
Construction Days	320	0.876712329					
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1	
Age Sensitivity Factor	10	10	3	3	1	1	
ED	0.25	0.876712329	0.876712329	0.876712329	0.876712329	0.876712329	
AT	70	70	70	70	70	70	
FAH	0.85	0.85	0.72	0.72	0.73	0.73	
Risk for Each Age Group	3.23108E-07	3.42124E-06	6.86745E-07	5.94222E-07	9.03038E-08	7.81734E-08	
Risk per million Exposed	0.32310779	3.421242274	0.686744688	0.594221594	0.09030381	0.078173447	
Cancer Risk Per Million 9-years	4.43						
Cancer Risk Per Million 30-years	4.43						
Cancer Risk Per Million 70-years	**4.42**						
		13.28	87.12467035	100.40	76.29093452	73.79701623	150.0879507

ATTACHMENT D

Terex 4242SR Rock Crusher Cut Sheet

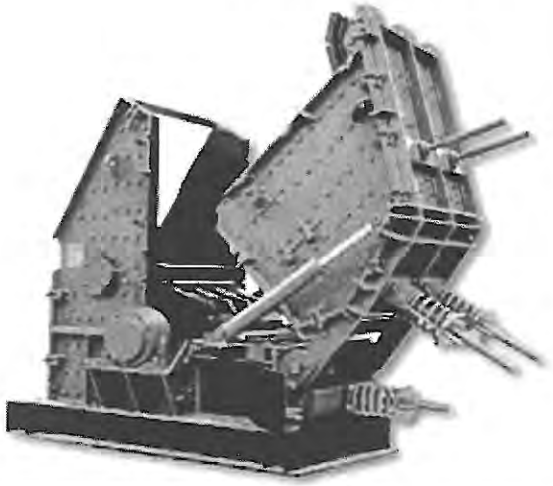
TEREX | PEGSON

4242SR SPECIFICATION

Above photograph features a 4242SR fitted with the optional side conveyor and magnet

IMPACT CRUSHER

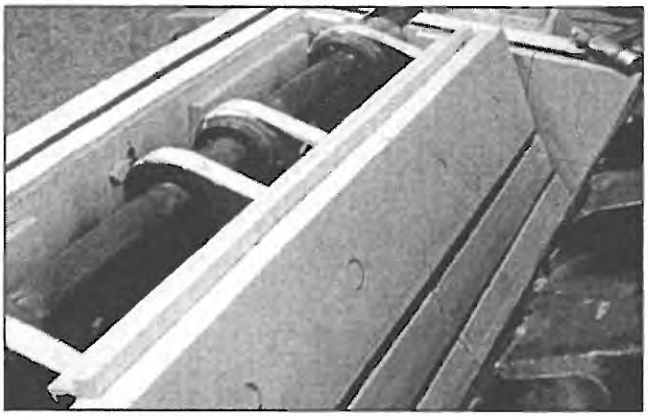
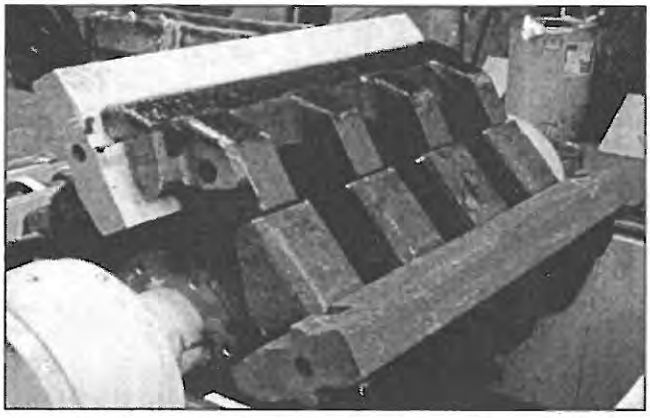
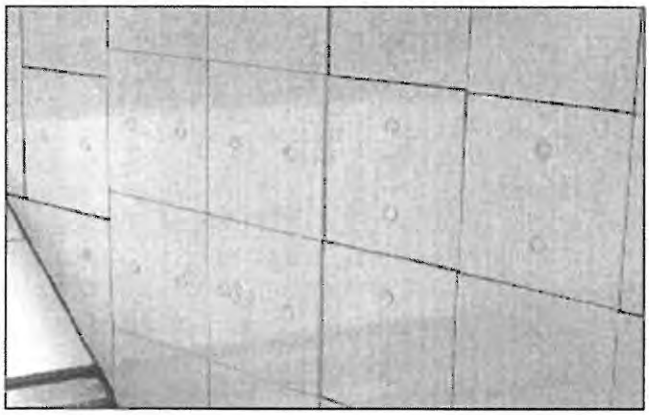
Crusher type:	428 Fixed Hammer Impactor.
Feed opening:	1067mm x 711mm.
Rotor Width:	1066 mm.
Rotor Diameter:	1066 mm (Over Hammers).
Crusher frame:	Fabricated from steel plate and fitted with replaceable liner plates.
Rotor:	Runs in two heavy-duty spherical self aligning roller bearings and is fitted with four reversible and replaceable fixed blow bars.
Blowbars:	Two full size and two half size high manganese blow bars are fitted as standard.
Impact aprons:	Fitted in upper and middle positions and lined with wear resistant impact plates.
Drive:	Through wedge belts with screw tension adjustment on engine.
Engine pulley:	Machines built for stock are fitted with the standard speed pulley (suitable for quarry applications). The slower crusher pulley is supplied loose.
Maximum feed size:	$400mm^3$ depending on type of blow bar and material being processed.
Impactor speeds:	Slow 504 rpm (224mm diameter) Std. 630 rpm (280mm diameter)
Lubrication:	Greased roller bearings, inner and outer labyrinth seals.
Adjustment:	Manual adjustment on upper and lower aprons with overload compression springs on lower apron.
Maintenance:	Hydraulic case opening
Crusher Liners:	Fully lined internally with abrasion resistant steel.
Grinding path:	Optional grinding path with manual adjustment and overload compression springs suitable for certain quarry applications.



APPLICATIONS

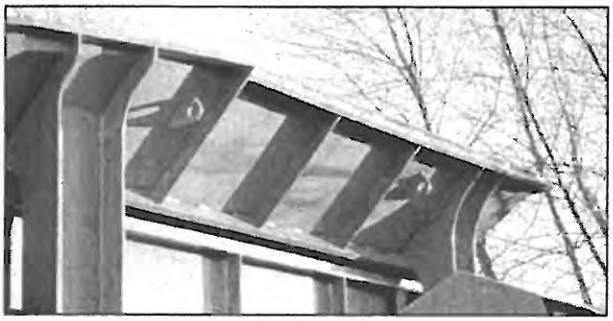
This plant is designed for both demolition and quarrying applications. When fitted with manganese blow bars the crusher will tolerate small quantities of steel reinforcing bar in the feed. However, the machine is not designed to accept large pieces of steel or other uncrushable objects, and the feed material should be assessed / inspected for suitability prior to use. It is vitally important that large pieces of steel or similar uncrushable objects are not allowed to enter the crushing chamber as severe damage and injury may occur. When High Chrome bars are fitted, no steel should be allowed to enter the chamber, the machine should only be used on quarry applications, or clean materials such as asphalt.

IMPACT CRUSHER - INTERNAL


HOPPER

Hopper type:	Fixed Hopper.
Hopper length:	4m.
Hopper width:	2.1m.
Hopper capacity:	Up to 3.8m^3 gross depending on method of feed.
Hopper body:	Hardox wear resistant steel plate with suitably braced steel sections.



VIBRATING GRIZZLY FEEDER

Type:	Spring mounted vibrating pan.
Vibrating unit:	Twin heavy-duty cast eccentric shafts running in spherical roller bearings, gear coupled at drive end.
Length:	3.8m.
Width:	1.08m.
Pan:	12mm thick abrasion resistant steel bottom plate is included in the welded construction.
Drive:	Flange mounted hydraulic motor
Grizzly:	2.16m long double section of welded tapered finger bars at 50mm spaces fabricated in 20mm thick abrasion resistant steel.
Underscreen:	Removable rubber blanking mat fitted as standard. This can be substituted for various aperture wire meshes.
Control:	Variable speed control through a proportional flow control valve.

PLANT CHUTEWORK

Impactor feed chute: Fabricated in 10mm mild steel plate with full width single strand chain curtain and rubber curtain. Liners are fitted at wear points.

Grizzly fines chute: Chutework fabricated in 6mm mild steel plate is provided with two-way flapdoor. Material passing over the blanking mat is discharged to the main product conveyor via the bypass chute.

ON PLANT PRODUCT CONVEYOR

CONVEYOR 1

Conveyor type: Troughed belt conveyor with fixed tail end.

Belt type: Ripstop EP500/3 with 5mm top and 2mm bottom heavy-duty rubber covers.

Belt width: 1m.

Drive: Direct drive hydraulic motor

Feedboot: Fabricated in mild steel plate with abrasion resistant steel liners.

Control: Fixed speed.

Skirting: Fully skirted wear resistant rubber sealing along the conveyor length.

Belt covers: Canvas type removable dust covers are fitted at the head end.

Impact cradle: This is provided beneath the belt immediately below the impactor outlet.

Lubrication: Grease nipples located on bearing housings at tailshaft.

TOP DECK SIDE TRANSFER CONVEYOR

CONVEYOR 2

Conveyor type: Plain belt.

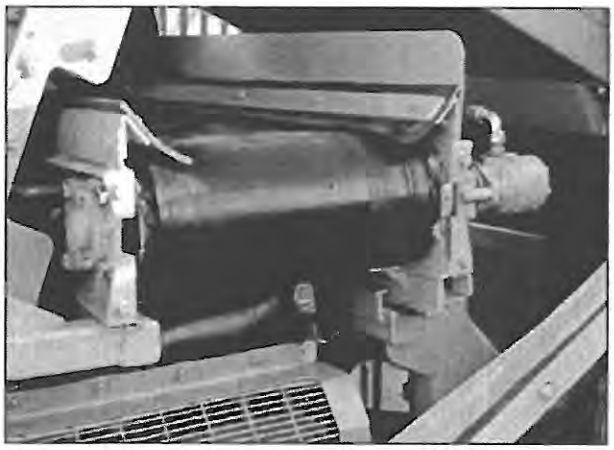
Belt type: EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.

Conveyor: Transfers material from the top deck of the sizing screen to the re-circulating conveyor.

Width: 500mm.

Drive: Direct drive hydraulic motor.

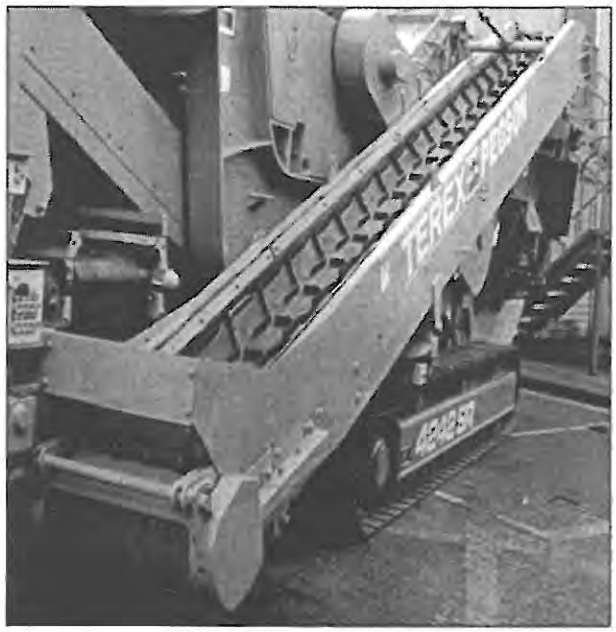
Lubrication: Grease nipples located on bearing housing at head and tailshaft.



RE-CIRCULATING CONVEYOR

CONVEYOR 3

Conveyor type:	Chevron type troughed belt.
Belt type:	EP315/2 with 3mm top and 1mm bottom rubber covers, 35mm high cleats and a vulcanised joint.
Conveyor:	Returns oversize material transferred from the top deck back to the impactor for re-crushing. This conveyor can be slewed to enable oversize material to be stockpiled at the side of the plant.
Width:	500mm.
Drive:	Direct drive hydraulic motor
Lubrication:	Grease nipples located on bearing housing for tailshaft. Remote grease nipples for head drum.



FINES PRODUCT CONVEYOR

CONVEYOR 4

Conveyor type:	Plain troughed belt
Belt type:	EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.
Position:	Mounted beneath the sizing screen.
Width:	1.4m.
Discharge Height:	2.93m.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft.
Control:	Fixed Speed.

BOTTOM DECK SIDE TRANSFER CONVEYOR

CONVEYOR 5

Conveyor type:	Plain belt.
Belt type:	EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.
Conveyor:	Transfers material from the bottom deck of the sizing screen to the optional plant mounted stockpiling conveyor or the re-circulating conveyor when in position.
Width:	500mm.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft.

STOCKPILING CONVEYOR

CONVEYOR 6 (Optional extra)

Conveyor type:	Chevron type troughed belt
Belt type:	EP315/2 with 3mm top and 1mm bottom rubber covers, 35mm high cleats and a vulcanised joint.
Width:	500mm.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at tailshaft. Remote grease nipples for head drum.
Conveyor:	Stockpiles material transferred from the bottom deck side transfer conveyor to the side of the plant.

SIZING SCREEN

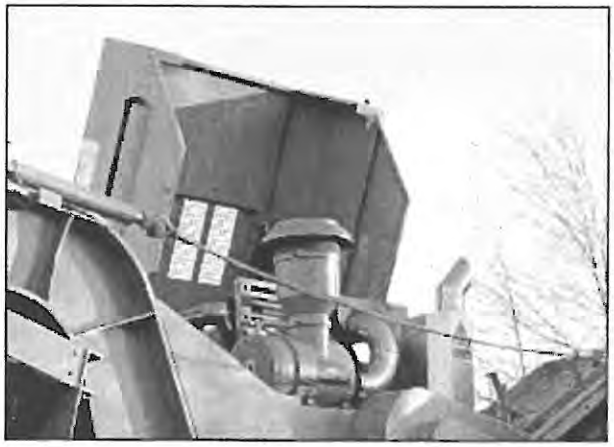
Type:	Double deck vibrating screen (Four bearing type)
Size:	1525 x 3350.
Position:	Mounted beneath the impactor product conveyor.
Drive:	Hydraulic drive.
Top deck:	45mm aperture fitted as standard
Bottom deck:	Optional mesh.
Control:	Fixed speed. (1100 rpm)
Lubrication:	Four grease nipples.
Access:	Fines conveyor and screen can be lowered for maintenance.

POWERPACK

Powerpack type:	Caterpillar C-9.
Performance:	309 HP (230kW) at 1800 rpm at sea level.
Engine:	Six cylinders, four stroke, direct Injection.
Fuel tank capacity:	463 Litres.

CLUTCH

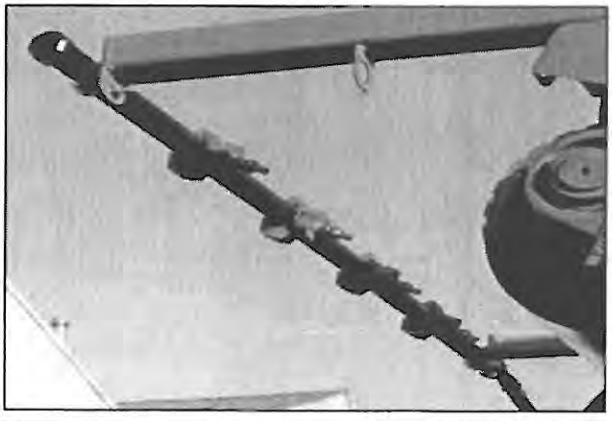
Clutch type:	Manually operated twin disc clutch.



DUST SUPPRESSION SPRAYS

Sprays bars with atomiser nozzles are mounted over the impactor discharge point and the fines product conveyor head piped to an inlet manifold for client's pressured water supply.

Type:	Clean water multi atomising nozzles.
Inlet:	Single Point.
Pressure required:	2.8 bar (42 psi).
Water supply:	7 litres per minute.
Frost protection:	Via system drain valves.
Pump:	Optional extra.



CRAWLER TRACKS

Type:	Heavy-duty tracks fitted as standard.
Pitch:	160mm.
Longitudinal centres:	3800mm.
Track width:	400 mm.
Climbing grade:	29˚ maximum.
High speed:	0.8 km/hr.
Slow speed:	0.322 km/hr.
Drive:	Hydraulic integral motors
Track tensioning:	Hydraulic adjuster, grease tension.

GUARDS

Wire mesh or sheet metal guards are provided for all drives, flywheels, pulleys & couplings.

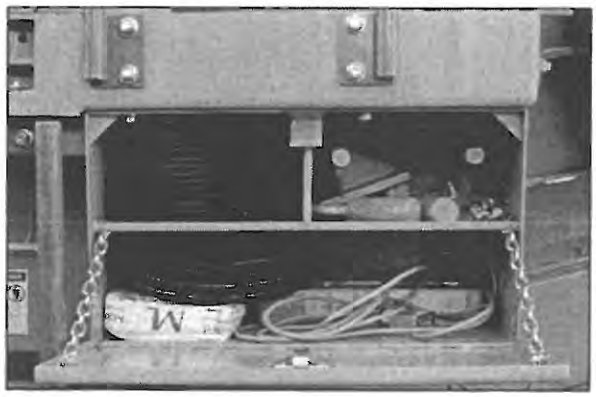
The guards provided are designed and manufactured to CE & ANSI standards.

PLATFORMS

A steel grid maintenance platform is provided on one side of the feeder and impactor fitted with double row handrails and access ladders. Platforms are also included to gain access to the rear of the crusher and the powerpack.

TOOLBOX

A plant mounted lockable toolbox is provided containing the slower speed pulley, operators manual, impactor stops, spanner, door open locking pins, screen mesh tensioning hoses, blow bar ejector hoses and a grease gun.



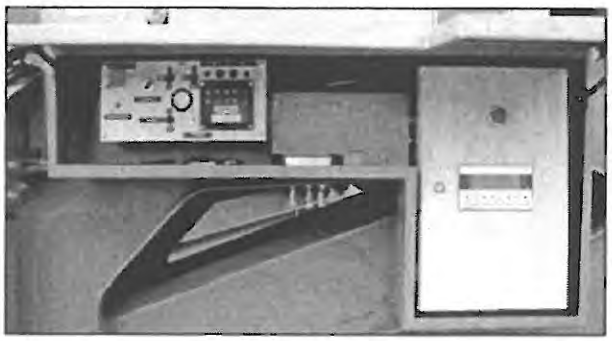
CHASSIS

Heavy duty steel fabricated I section of welded construction.

PLC CONTROLS

A PLC control system is fitted onto the plant to operate the following items: -

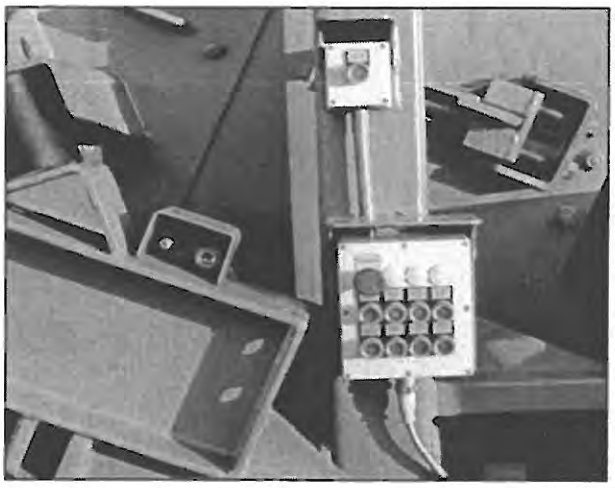
- Feeder (Start/Stop/Speed).
- Optional Dirt Conveyor (Start/Stop).
  (Also operates Re-Circulating, stockpiling and side transfer conveyors)
- Product Conveyor (Start/Stop).
- Screen and fines conveyor (Start/Stop).



SET UP CONTROLS

Controls are fitted onto the plant to operate the following items: -

- Side chute (Raise/Lower).
- Screen/Fines Conveyor (Raise/Lower).
- Recirculating Conveyor (Raise/Lower).
- Dirt Conveyor (Raise/Lower)



UMBILICAL CONTROL

An umbilical control unit is also supplied with the plant. This is fitted with controls for the track motion, feeder stop, start and a stop button for the plant.

OPTIONAL EXTRAS

(For prices refer to your dealer)

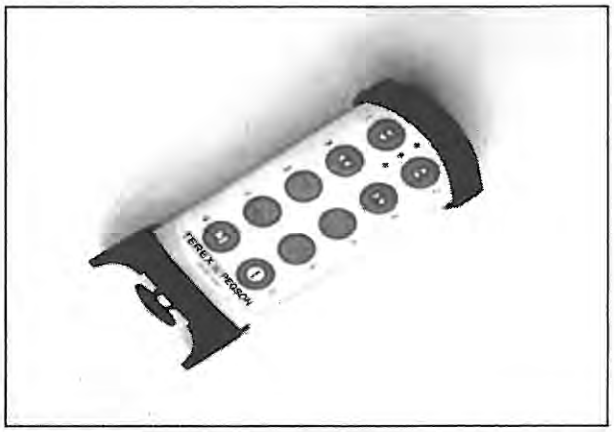
- High Chrome hammers (only for use when no steel in feed).
- Single idler belt weigher with integrator and speed sensing wheel fitted to fines conveyor.
- 500mm wide stockpiling conveyor from the bottom oversize transfer conveyor.
- Four full size hammers in lieu of two full and two half hammers.
- Re-fuelling pump kit.
- Radio remote control.
- Overband magnetic separator
- Side/dirt conveyor.
- Wire meshes for feeder underscreen to separate scalpings at 10mm, 20mm, 30mm, 40mm or 50mm. The optional dirt conveyor must be fitted.
- Grinding path (not suitable for demolition applications) fitted in the lower position and lined with wear resistant impact plates on the upper section, and reversible manganese impact bars on the lower section. When fitted greater control of the product size is achieved together with improved product shape.

RECOMMENDED OPTIONAL EXTRAS

- Engine fire extinguisher system.
- Hydraulic driven water pump assembly to provide a pressurised water supply to the dust suppression sprays.

REMOTE CONTROL (OPTIONAL EXTRA)

This option will control the tracking function and also provides stop and start controls for the vibrating grizzly feeder, together with a stop button for the plant. **This facility is only available in certain countries where type approval has been obtained.** For a full list of countries, please consult TP or your dealer.



ON PLANT DIRT/SIDE CONVEYOR

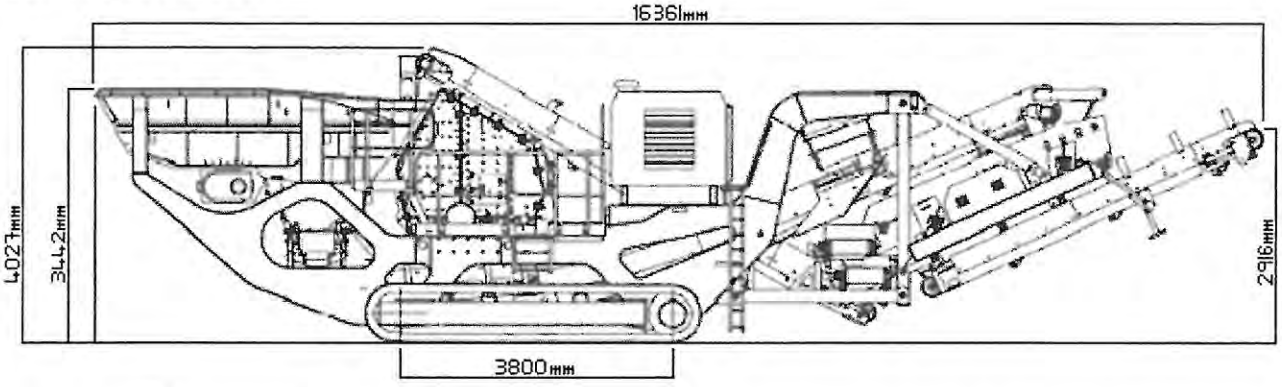
(OPTIONAL EXTRA) CONVEYOR DC

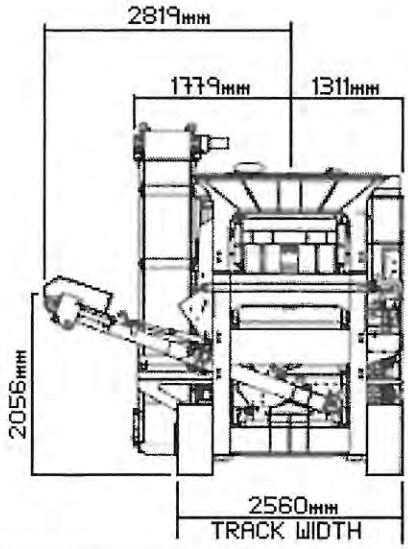
Conveyor type:	Plain troughed belt, hydraulic folding for transport.
Width:	600mm.
Discharge height:	2.0m.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft. Remote greasing at tail drum.
Skirts:	Full length.
Position:	Mounted to discharge on near side of plant.

MAGNET
(OPTIONAL EXTRA)

Magnet Type:	Suspended self-cleaning overband, fitted with endless belt.
Magnet Width:	750mm.
Magnet length:	1000mm.
Drive:	Hydraulic Motor.
Control:	Pre-set variable speed.
Discharge chute:	Via stainless steel shedder plate.
Power:	570 Gauss at 200mm. 450 Gauss at 250mm.

PLANT DIAGRAM





APPROXIMATE OVERALL PLANT WEIGHTS & DIMENSIONS

Operating Length:	**16361 mm**
Operating Height:	**4027 mm**
Transport Length:	**16361 mm**
Transport Width:	**3090 mm**
Transport Height:	**3442 mm**
Total plant weight:	**44500 Kg**

PAINTING

The plant is finish painted RAL 5015 Blue. The tracks and handrails are painted RAL 7012 Grey.

GENERAL

TEREX | Pegson equipment complies with CE requirements.

The plant is designed to operate between ambient temperatures of between -10c and 40c at altitudes up to 1000 meters above sea level. For applications outside this range please consult with Terex Pegson Limited.

Above line drawings feature a 4242SR with optional magnet and side conveyor.

Please consult TEREX | Pegson if you have any other specific requirements in respect of guarding, noise or vibration levels, dust emissions, or any other factors relevant to health and safety measures or environmental protection needs. On receipt of specific requests, we will endeavour to ascertain the need for additional equipment and, if appropriate, quote extra to contract prices. Every endeavour will be made to supply equipment as specified, but we reserve the right, where necessary, to amend the specifications without prior notice as we operate a policy of continual product development. It is the importers responsibility to check that all equipment supplied complies with local legislation.