AIR QUALITY, GREENHOUSE GAS, AND ENERGY IMPACT ANALYSIS

FOR THE

VERNOLA RANCH SPECIFIC PLAN

Prepared for:

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1. Air Quality

1.1. Introduction

1.1.1. Purpose and Methods of Analysis

The following air quality assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of construction and operation of the proposed Project would cause exceedances of the South Coast Air Quality Management District's (SCAQMD) thresholds for air quality in the Project area. The greenhouse gas (GHG) assessment was prepared to evaluate whether the expected criteria GHG emissions generated as a result of the proposed Project would exceed the City's screening significance threshold. The energy assessment was prepared to evaluate whether the Project would result in wasteful, inefficient, or unnecessary consumption of energy resources. The assessments herein were conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 et seq.). The criteria air pollutant methodology follows the *CEQA Air Quality Handbook* prepared by the SCAQMD (SCAQMD 1993) for quantification of emissions and evaluation of potential impacts to air quality. The methodology used in the GHG analysis is consistent with SCAQMD GHG Guidance (SCAQMD 2008a). As recommended by SCAQMD, the **Cal**ifornia **E**missions **E**stimator **Mod**el® version 2022.1 (CalEEMod) was used to quantify Project-related emissions.

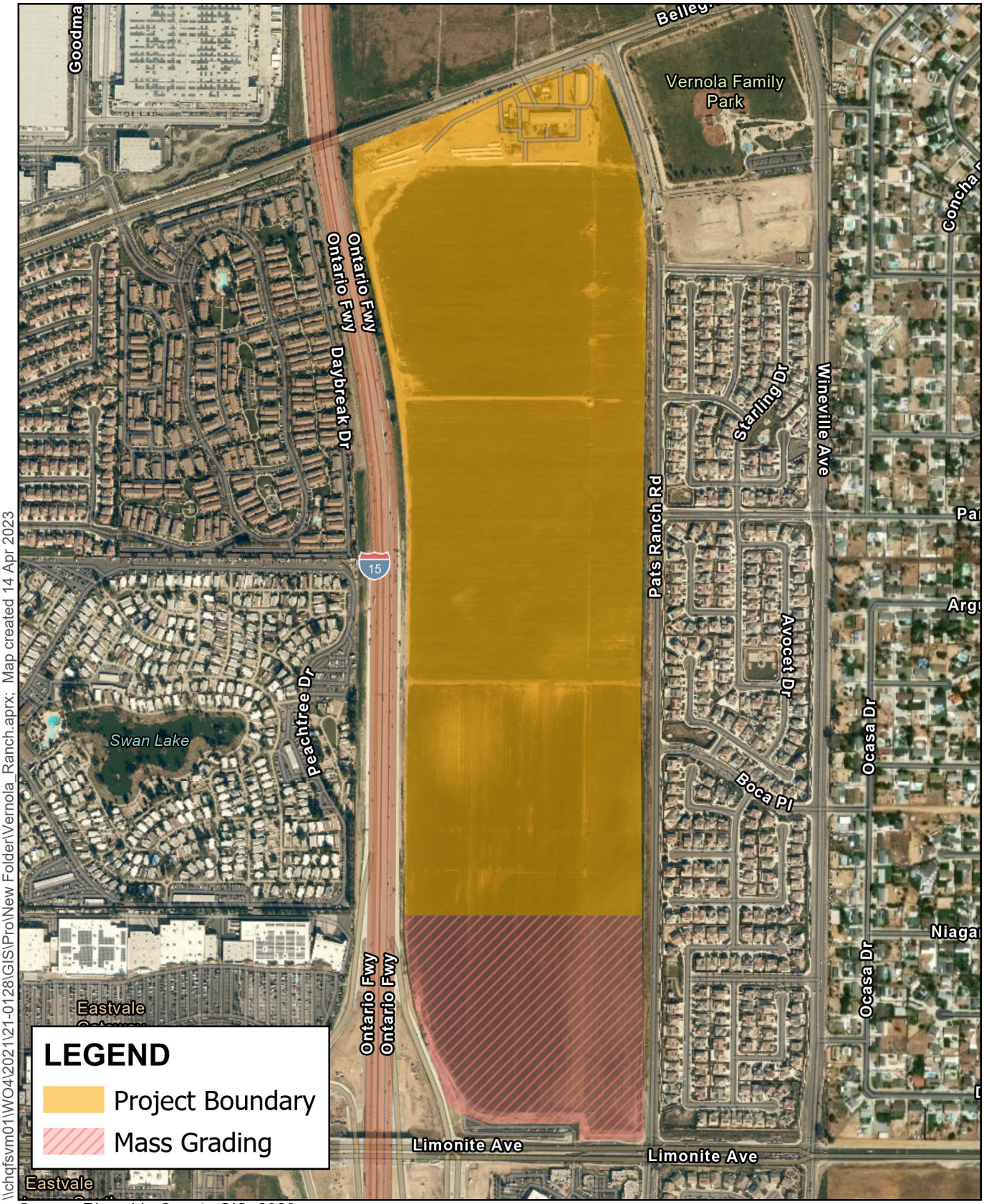
1.1.2. Project Description

The Vernola Ranch Specific Plan (VRSP) Project consists of a residential community within the City of Jurupa Valley, north of Limonite Avenue, south of Bellegrave Avenue, east of the Interstate 15 (I-15) freeway, and west of Pats Ranch Road. (**Figure 1 – Proposed Project Location**)

The VRSP Project proposes approximately 1,576 homes (single-family, multi-family, townhomes, and other housing types), recreation areas, network of trails and parks, an internal street network, open space, landscaping, and street improvements on approximately 153 gross acres. (**Figure 2 – Proposed Project Land Use Plan**) As shown on **Figure 2**, the Project also includes an overlay for a potential elementary school site located at the northeast portion of the site. A Tentative Tract Map (TTM) is also proposed which will be processed to create the planning areas and phasing for the VRSP. The analysis herein is based on the phasing evaluated in the *Vernola Ranch Specific Plan Traffic Study* (WEBB 2023), herein after referred to as the VRSP TIA. The construction phasing is shown on **Figure 3 – Proposed Project Phasing Plan**.

Approximately 36 acres between the southern boundary of the proposed VRSP and Limonite Avenue is excluded from the Specific Plan boundary. However, since this area includes a portion of several of the legal parcels of the proposed VRSP Project, the TTM will cover the entire proposed 153-acre VRSP, as well as the balance of the legal parcels to separate this area out. Since the southern ±36 acres are adjacent to the south, it will be included in the VRSP mass grading conducted at one time to balance; therefore, this area will be evaluated in the grading analysis for the VRSP as shown in **Figure 1**.

The VRSP Project also includes approximately 11.7 acres of off-site improvements along the Project frontage. At the time this study was prepared, the off-site improvement area analyzed was approximately 10 acres. Although the off-site improvement area slightly increased, no impacts beyond what is identified herein are expected to occur because the off-road construction equipment list would not increase. The construction equipment list is not anticipated to change due to the physical constraints of the off-site area.



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Source: Riverside County GIS, 2020

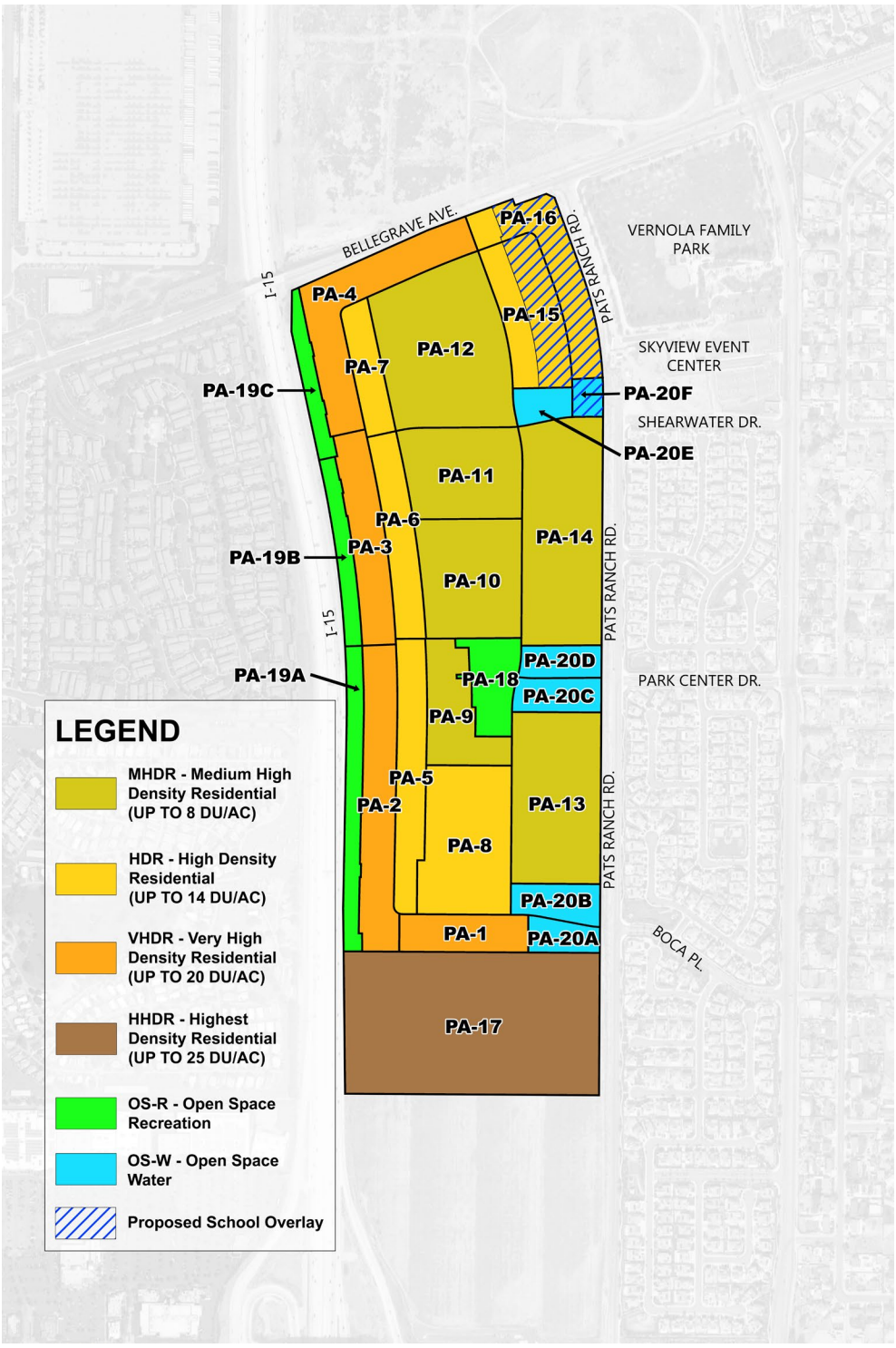
Figure 1 - Proposed Project Location

Vernola Ranch Specific Plan
Air Quality and Greenhouse Gas Impact Report

0 420 840 1,680 US Feet

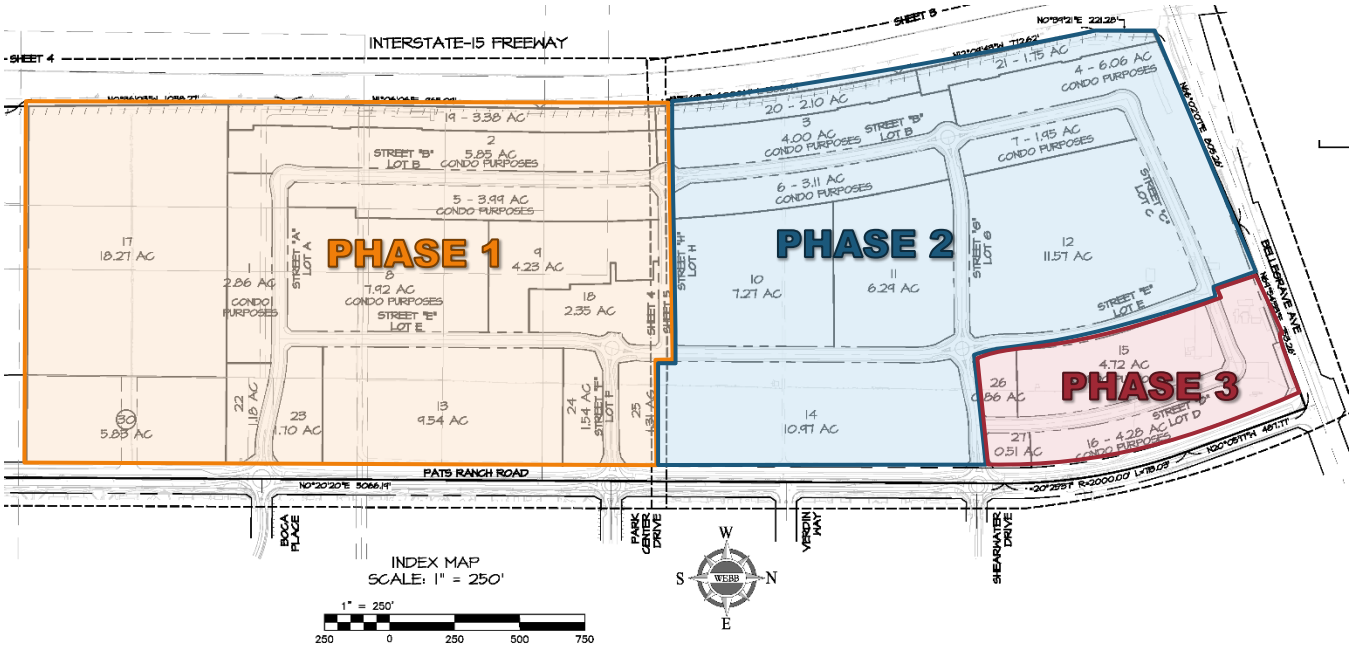
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Figure 2 – Proposed Project Land Use Plan



Source: Vernola Ranch Specific Plan, Land Use Plan

Figure 3 – Proposed Project Phasing Plan



Source: VRSP TIA

1.2. Setting

1.2.1. Background

Air quality impacts can be described in a short-term and long-term perspective. Short-term impacts will occur during site construction-related activities. Long-term air quality impacts will occur once a project is in operation.

Many air quality impacts from dispersed mobile sources (cars and trucks), i.e., the dominant pollution generators from the proposed Project, often occur hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual source is generally immeasurably small. The SCAQMD has therefore developed suggested surrogate significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. Air quality impacts can be analyzed on a regional and localized level. Regional air quality thresholds examine the effect of project emissions on the air quality of the South Coast Air Basin (Basin), while localized air quality impacts examine the effect of project emissions on the neighborhood around the project site. This report contains analysis of both regional and local air quality impacts from project construction (short-term) and operation (long-term).

1.2.2. Physical Setting

The Project site is located within the city of Jurupa Valley in western Riverside County within the Basin, under the jurisdiction of the SCAQMD. The Basin consists of Orange County, together with the coastal and mountain portions of Los Angeles, Riverside, and San Bernardino counties. Regional and local air quality within the Basin is affected by topography, atmospheric inversions, and dominant onshore flows. Topographic features such as the San Gabriel, San Bernardino, and San Jacinto Mountains form natural

horizontal barriers to the dispersion of air contaminants. The presence of atmospheric inversions limits the vertical dispersion of air pollutants. With an inversion, the temperature initially follows a normal pattern of decreasing temperature with increasing altitude; however, at some elevations, the trend reverses and temperature begins to increase as altitude increases. This transition to increasing temperature establishes the effective mixing height of the atmosphere and acts as a barrier to vertical dispersion of pollutants (SCAQMD 1993).

Dominant onshore flow provides the driving mechanism for both air pollution transport and pollutant dispersion. Air pollution generated in coastal areas is transported east to inland receptors by the onshore flow during the daytime until a natural barrier (the mountains) is confronted, limiting the horizontal dispersion of pollutants. The result is a gradual degradation of air quality from coastal areas to inland areas, which is most evident with the photochemical pollutants such as ozone formed under reactions with sunlight (SCAQMD 1993).

Climate

Terrain and geographical location determine climate in the Basin. The Project site lies within the terrain south of the San Gabriel and San Bernardino Mountains and is located between the San Gorgonio and San Jacinto and Santa Ana Mountains. The climate in the Basin is typical of southern California's Mediterranean climate, which is characterized by dry, warm summers and mild winters. Winters typically have infrequent rainfall, light winds, and frequent early morning fog and clouds that turn to hazy afternoon sunshine.

The following includes factors that govern micro-climate differences among inland locations within the Basin: 1) the distance of the mean air trajectory from the site to the ocean; 2) the site elevation; 3) the existence of any intervening terrain that may affect airflow or moisture content; and 4) the proximity to canyons or mountain passes. As a general rule, locations farthest inland from the ocean have the hottest summer afternoons, the lowest rainfall, and the least amount of fog and clouds. Foothill communities in the Basin have greater levels of precipitation, cooler summer afternoons and may be exposed to wind funneling through nearby canyons during Santa Ana winds. Terrain will generally steer local wind patterns (SCAQMD 1993).

The Project site is located within the city of Jurupa Valley which is bounded by the Jurupa Mountains and Pedley hills, respectively, within the center area of the Basin.

Precipitation and Temperature

Annual average temperatures in the Basin are typically in the low to mid-60s (degrees Fahrenheit, or °F). Temperatures above 100 °F are recorded for all portions of the basin during the summer months (SCAQMD 1993).

The Western Regional Climate Center (WRCC) maintains monitoring stations and historical climate information for the western United States. The closest cooperative climatological station to Jurupa Valley is in Riverside, the Riverside Fire Station 3 Cooperative station (ID No.047470), approximately 9.3 miles southeast. Climatological data from this station spanning from 1981-2010 shows an annual average temperature of 66.6° F, with December as the coldest month (mean daily minimum temperatures of 41.6° F) and August as the warmest month of the year (mean daily maximum temperatures of 95.7° F) (WRCC).

The rainy season in the basin is November to April. Summer rainfall can occur as widely scattered thunderstorms near the coast and in the mountainous regions in the eastern basin. Rainfall averages vary

over the basin. For example, the City of Riverside averages 9 inches of rainfall, while the City of Los Angeles averages 14 inches. Rainy days vary from 5 to 10 percent of all days in the basin, with the most frequent occurrences of rainfall near the coast (SCAQMD 1993).

Over this same period of time, the climatological data from the Riverside Fire Station 3 Cooperative station shows an annual average precipitation of 9.89 inches. Approximately eighty-two percent of the annual rainfall occurs during the November to March rain season. The highest monthly average rainfall occurs during February. However, year to year patterns in rainfall are unpredictable due to fluctuations in the weather.

Winds

The interaction of land (offshore) and sea (onshore) breezes control local wind patterns in the area. Daytime winds typically flow from the coast to the inland areas, while this pattern usually reverses in the evenings, flowing from the inland areas to the ocean (SCAQMD 1993). Air stagnation may occur during the early evening and early morning due to periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. Locally, the prevailing wind is generally from west to east (**Figure 4 – Wind Rose**).

Categories of Emission Sources

Air pollutant emissions sources are typically grouped into two categories: stationary and mobile sources. These emission categories are defined and discussed in the following subsections.

Stationary Sources

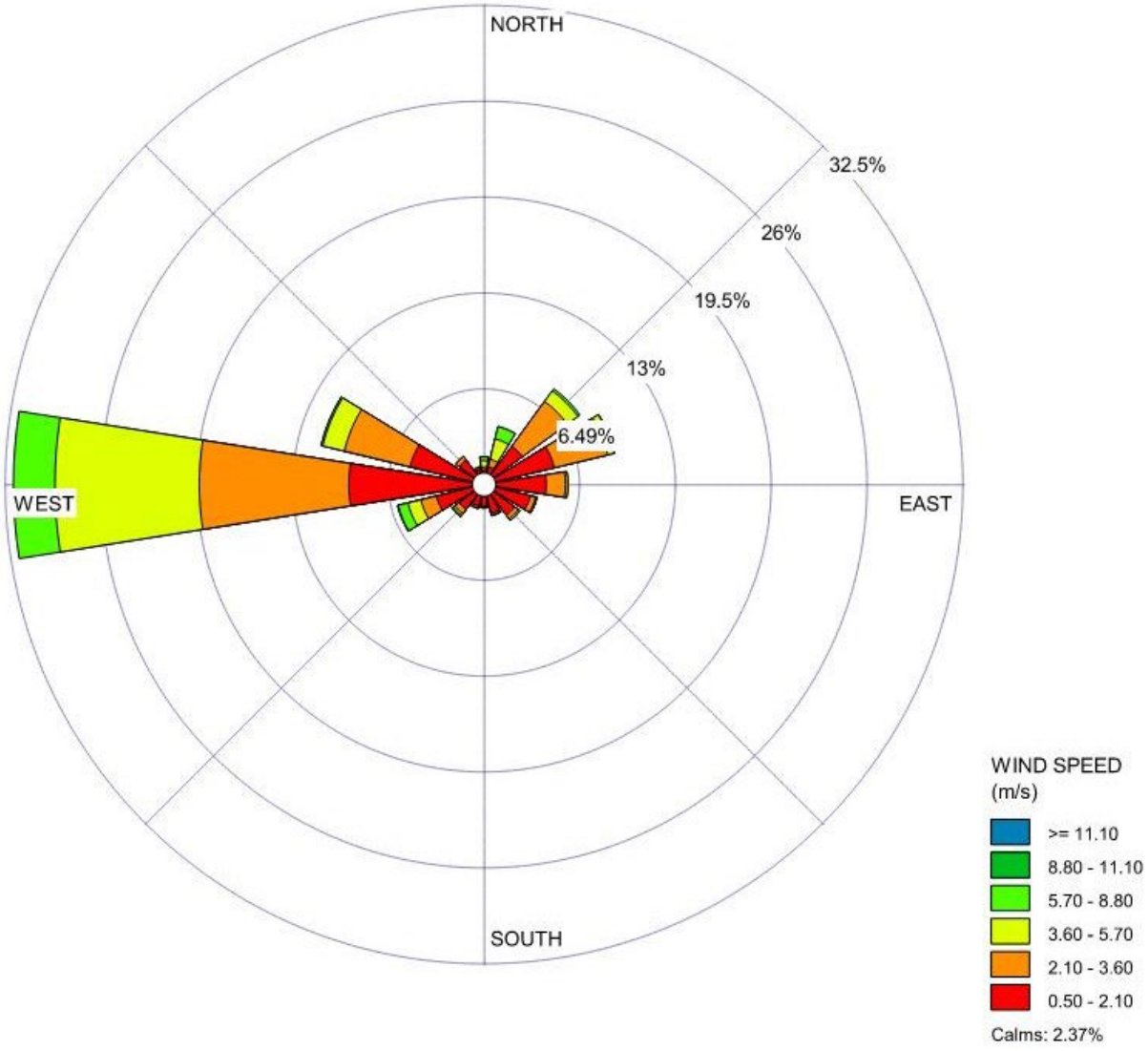
Stationary sources are divided into two major subcategories: point and area sources. Point sources consist of a single emission source with an identified location at a facility. A single facility could have multiple point sources located on-site. Stationary point sources are usually associated with manufacturing and industrial processes. Examples of point sources include boilers or other types of combustion equipment at oil refineries, electric power plants, etc. Area sources are small emission sources that are widely distributed but are cumulatively substantial because there may be a large number of sources. Examples include residential water heaters; painting operations; lawn mowers; agricultural fields; landfills; and consumer products, such as barbecue lighter fluid and hair spray (SCAQMD 1993).

Mobile Sources

Mobile sources are motorized vehicles, which are classified as either on-road or off-road. On-road mobile sources typically include automobiles and trucks that operate on public roadways. Off-road mobile sources include aircraft, ships, trains, and self-propelled construction equipment that operate off public roadways. Mobile source emissions are accounted for as both direct source emissions (those directly emitted by the individual source) and indirect source emissions, which are sources that by themselves do not emit air contaminants but indirectly cause the generation of air pollutants by attracting vehicles. Examples of indirect sources include office complexes, commercial and government centers, sports and recreational complexes, and residential developments (SCAQMD 1993).

Riverside, California – 2012–2016

January 1-December 31; Midnight – 11:59 PM



Note: Data taken from the Riverside Monitoring Station, from January 1, 2012 to December 31, 2016. Calm winds: 2.37%. Average wind speed: 2.51%. Direction of the colored bars show the direction the wind is blowing from, colors represent various wind speeds, and percentages marked on rings indicate the percentage that the wind blows from that direction and at that particular wind speed.

Figure 4 – Wind Rose

Criteria Pollutants

Air pollutants are classified as either primary, or secondary, depending on how they are formed. Primary pollutants are generated daily and are emitted directly from a source into the atmosphere. Examples of primary pollutants include carbon monoxide (CO), nitrogen dioxide (NO_2) and nitric oxide (NO)—collectively known as oxides of nitrogen (NO_X), sulfur dioxide (SO_2), particulates (PM-10 and PM-2.5) and various hydrocarbons (HC) or volatile organic compounds (VOC), which are also referred to as reactive organic gases (ROG). The predominant source of air emissions generated by the Project development is expected to be vehicle emissions. Motor vehicles primarily emit CO, NO_X, and VOC/ROG/HC (Volatile Organic Compounds/Reactive Organic Gases/Hydrocarbons).

Secondary pollutants are created over time and occur within the atmosphere as chemical and photochemical reactions take place. An example of a secondary pollutant is ozone (O_3), which is one of the products formed when NO_X reacts with HC, in the presence of sunlight. Other secondary pollutants include photochemical aerosols. Secondary pollutants such as ozone represent major air quality problems in the Basin.

The Federal Clean Air Act of 1970 established the National Ambient Air Quality Standards (NAAQS). Six "criteria" air pollutants were identified using specific medical evidence available at that time, and NAAQS were established for those chemicals. The State of California has adopted the same six chemicals as criteria pollutants but has established different allowable levels. The six criteria pollutants are: carbon monoxide, nitrogen dioxide, ozone, lead, particulates less than 10 microns in size, and sulfur dioxide. The following is a further discussion of the criteria pollutants, as well as volatile organic compounds.

- **Reactive Organic Gases/Volatile Organic Compounds (ROG/VOC)** - It should be noted that there are no state or federal ambient air quality standards for VOCs because they are not classified as criteria pollutants. VOCs are regulated; however, a reduction in VOC emissions reduces certain chemical reactions, which contribute to the formation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM-10 and lower visibility levels. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOC because of interference with oxygen uptake. In general, ambient VOC concentrations in the atmosphere, even at low concentrations, are suspected to cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis. Some hydrocarbon components classified as VOC emissions are thought or known to be hazardous. Benzene, for example, is a hydrocarbon component of VOC emissions that is known to be a human carcinogen. (SCAQMD 2005)
- **Oxides of Nitrogen (NO_X)** – Those that are important in air pollution are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed by a combination of nitrogen and oxygen when combustion takes place under high temperatures and pressures. NO_2 is a reddish-brown gas formed by the combination of NO with oxygen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations, as well as ships, railroads, and aircraft are the primary sources of NO_X. NO_2 at atmospheric concentrations is a potential irritant that can cause coughing in healthy people; can alter respiratory responsiveness and pulmonary functions in people with preexisting respiratory illness; and potentially lead to increased levels of respiratory illness in children. (USEPA 2023)
- **Carbon Monoxide (CO)** – A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing substances. Concentrations of CO are generally higher during the winter months when meteorological conditions favor the build-up of primary pollutants. Automobiles are the major source of CO in the Basin, although various industrial processes also emit CO through

incomplete combustion of fuels. In high concentrations, CO can cause serious health problems in humans by limiting the red blood cells' ability to carry oxygen. (SCAQMD 1993)

- **Sulfur dioxide (SO_2)/oxides of sulfur (SO_X)** – A colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. SO_2 can result in temporary breathing impairment in asthmatic children and adults engaged in active outdoor activities. When combined with particulate matter, SO_2 can cause symptoms such as shortness of breath and wheezing; and, with long-term exposure, it can lead to the exacerbation of existing cardiovascular disease and respiratory illnesses. Although SO_2 concentrations have been reduced to levels well below state and federal standards, further reductions in SO_2 emissions are needed because SO_2 is a precursor to sulfate and particulate matter less than 10 microns in diameter. (USEPA 2023)
- **Atmospheric Particulate Matter (PM-10, PM-2.5)** – Made up of fine solid and liquid particles, such as soot, dust, aerosols, fumes, and mists. PM-10 consists of particulate matter that is 10 microns or less in diameter, and PM-2.5 consists of particulate matter of 2.5 microns or less in size. Both PM-10 and PM-2.5 can be inhaled into the deepest part of the lung, attributing to health effects. The presence of these fine particles by themselves cause lung damage and interfere with the body's ability to clear its respiratory tract. Said particles can also act as a carrier of other toxic substances. (SCAQMD 1993)

Health Effects

Sources and typical effects of criteria pollutants are summarized in **Table 1 – Primary Sources and Effects of Criteria Pollutants**.

The correlation between project-specific emissions and potential health impacts is complex and the SCAQMD has determined that attempting to quantify health impacts from projects that are not regional in scale (e.g., Basin-wide) may not be appropriate because it may be misleading and unreliable for various reasons including modeling limitations as well as where in the atmosphere the air pollutants interact and form (SCAQMD 2015). To date, the SCAQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health. However, if a project in the Basin exceeds the SCAQMD regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standard(s) are met in the Basin.

Table 1 – Primary Sources and Effects of Criteria Pollutants

Pollutant	Primary Effects
Ozone (O_3)	Respiratory Symptoms Worsening of lung diseases leading to premature death Damage to lung tissue Crop, forest and ecosystem damage Damage to a variety of materials, including rubber, plastics, fabrics, paint and metals.
PM 2.5 (particulate matter less than 2.5 microns in aerodynamic diameter)	Premature death Hospitalization for worsening of cardiovascular disease Hospitalization for respiratory disease Asthma-related emergency room visits Increased symptoms, increased inhaler usage

Pollutant	Primary Effects
PM 10 (particulate matter less than 10 microns in aerodynamic diameter)	Premature death & hospitalization, primarily for worsening of respiratory disease Reduced visibility and material soiling
Nitrogen Oxides (NO_X)	Lung irritation Enhanced allergic responses
Carbon monoxide (CO)	Chest pain in patients with heart disease Headache Light-headedness Reduced mental alertness
Sulfur dioxide (SO_2)	Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits
Lead	Impaired mental functioning in children Learning disabilities in children Brain and kidney damage
Hydrogen Sulfide (H_2S)	Nuisance odor (rotten egg smell) At high concentrations: headache & breathing difficulties
Sulfate	Same as PM-2.5, particularly worsening of asthma and other lung diseases Reduces visibility
Sulfate	Same as PM-2.5, particularly worsening of asthma and other lung diseases Reduces visibility
Vinyl Chloride	Central nervous system effects, such as dizziness, drowsiness & headaches Long-term exposure: liver damage & liver cancer
Visibility Reducing Particles	Reduced airport safety, scenic enjoyment, road safety, and discourages tourism
Toxic Air Contaminants About 200 chemicals have been listed as toxic air contaminants	Cancer Reproductive and development effects Neurological effects

Source: **https://ww2.arb.ca.gov/resources/common-air-pollutants**

Monitored Air Quality

The Project area is located within SCAQMD Source Receptor Area (SRA) 23. The most recent published data for SRA 23 is presented in **Table 2 – Source Receptor Area (SRA) 23, Air Quality Monitoring Summary – 2019-2021**. This data indicates that the baseline air quality conditions in the Project area include occasional events of unhealthy air. However, the frequency of smog alerts has dropped significantly in the last decade. Atmospheric concentrations of ozone and particulate matter are the two most significant air quality concerns in the Project area. Locally, no second stage alert (0.35 ppm/hour) has been called by SCAQMD in over twenty years. In fact, the last second stage alert was in Upland in 1988.

Table 2 – Source Receptor Area (SRA) 23, Air Quality Monitoring Summary – 2019–2021

	Pollutant/Standard	Monitoring Years		
		2019	2020	2021
No. Days Exceeded	Ozone (O_3):			
	California Standard:			
	1-Hour - 0.09 ppm	26	51	20
	8-Hour - 0.07 ppm	64	89	59
	Federal Primary Standards:			
	8-Hour - 0.070 ppm	64	89	53
	Max 1-Hour Conc. (ppm)	0.131	0.140	0.116
	Max 8-Hour Conc. (ppm)	0.099	0.117	0.094
No. Days Exceeded	Carbon Monoxide (CO):			
	California Standard:			
	1-Hour - 20 ppm	0	0	0
	8-Hour - 9.0 ppm	0	0	0
	Federal Primary Standards:			
	1-Hour - 35 ppm	0	0	0
	8-Hour - 9.0 ppm	0	0	0
	Max 1-Hour Conc. (ppm)	2.0	1.8	2.0
	Max 8-Hour Conc. (ppm)	1.3	1.5	1.6
Days Exceeded	Nitrogen Dioxide (NO_2):			
	California Standard:			
	1-Hour - 0.18 ppm (180 ppb)	0	0	0
	Federal Standard:			
	Annual Arithmetic Mean (53.4 ppb)	12.2	12.3	11.7
	Max. 1-Hour Conc. (ppb)	56.0	58.1	53.3
No. Days Exceeded	Sulfur Dioxide (SO_2) [a]:			
	California Standards:			
	1-Hour – 0.25 ppm (250 ppb)	0	0	0
	Federal Primary Standards:			
	1-Hour – 0.075 ppm (75 ppb)	0	0	0
	Max. 1-Hour Conc. (ppb)	1.8	2.2	2.1
No. Days Exceeded	Suspended Particulates (PM-10):			
	California Standards:			
	24-Hour - 50 μg/m^3	130	154	170
	Federal Primary Standards:			
	24-Hour – 150 μg/m^3	0	0	0
	Annual Arithmetic Mean (μg/m^3)	43.1	52.2	49.6
	Max. 24-Hour Conc. (μg/m^3)	143	124	132
No. Days Exceeded	Fine Particulates (PM-2.5) :			
	Federal Primary Standards:			
	24-Hour – 35μg/m^3	9	5	13
	Federal/State Annual Arithmetic Mean (12 μg/m3)	12.53	14.03	14.28
	Max. 24-Hour Conc. (μg/m^3)	46.7	38.7	77.6

Source: SCAQMD 2023

Notes: -- indicates no data available; ppm = parts per million; ppb = parts per billion; μg/m^3 = micrograms/cubic meter

[a] Metro Riverside County 1 air monitoring station (SRA 23) data summaries used because this pollutant not monitored for SRA 23 Metro Monitoring County 3.

Attainment Status

The USEPA has established national ambient air quality standards (NAAQS) for the six criteria pollutants described in **Table 2** to protect human health, with an adequate margin of safety. Likewise, the California EPA (CalEPA) has developed statewide standards for each of the criteria pollutants. If the concentration of one or more criteria pollutants within a geographic area is found to exceed the established statewide or NAAQS threshold level for one of the criteria pollutants, the area is considered to be in nonattainment for that pollutant.

The proposed Project site is located within a portion of the Basin that is designated as nonattainment for PM-10 by the state, as well as nonattainment for ozone, and PM-2.5 under both the state and federal standards (see **Table 3, Attainment Status**). As a result, the SCAQMD is required to develop an Air Quality Management Plan (AQMP) for the Basin to bring the area into attainment for all criteria pollutants.

Table 3 – Attainment Status

Criteria Air Pollutant	Attainment Designation	
	State	Federal
1-Hour Ozone	Nonattainment	Nonattainment (Extreme)
8-Hour Ozone	Nonattainment	Nonattainment (Extreme)
Carbon monoxide (1-Hour and 8-Hour)	Attainment	Attainment (Maintenance)
Nitrogen dioxide	Attainment	Unclassified/Attainment
Sulfur dioxide	Attainment	Unclassifiable/Attainment
PM-10	Nonattainment	Attainment (Maintenance)
PM-2.5	Nonattainment	Nonattainment (Serious)

Source: Table 2-3, National Ambient Air Quality Standards (NAAQS)—Attainment Status South Coast Basin and Table 2-5, California Ambient Air Quality Standards (CAAQS) Attainment Status South Coast Air Basin and Coachella Valley Portion of Salton Sea Air Basin, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, as identified by the SCAQMD, may include children, the elderly, athletes, and people who are sick. Sensitive receptors include residential uses, school playgrounds, childcare facilities, athletic facilities, hospitals, retirement homes, and convalescent homes (SCAQMD 2005, pp. 2-1 and G-5). The closest existing sensitive receptors to the Project site are residences adjacent to the east portion of the site (approximately 77 feet), shown on **Figure 5**.

1.3. Related Regulations

Criteria Air Pollutants

The Federal and State AAQS establish the context for the local air quality management plans (AQMP) and for determination of the significance of a project's contribution to local or regional pollutant concentrations. Federal and State AAQS are presented in **Table 3**. The AAQS represent the level of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other diseases or illness, and persons engaged in strenuous work or exercise, all referred to as “sensitive receptors.” As stated above,

SCAQMD defines a "sensitive receptor" as a land use or facility such as schools, childcare centers, athletic facilities, playgrounds, retirement homes, and convalescent homes (SCAQMD 1993).

Federal

Clean Air Act (CAA)

The USEPA is the lead Federal Agency charged with the implementation and enforcement of the Clean Air Act (CAA). As part of this effort, the USEPA is responsible for the establishment of national ambient air quality standards (referred to herein as the “Federal Standards” or NAAQS). They are designed to protect those sensitive receptors most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The CAA Amendments dictate that states containing areas violating the NAAQS must revise their SIPs to include extra control measures to reduce air pollution. California’s SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The SIP is periodically modified to reflect the latest emissions inventories, plans and rules and regulations of the various agencies with jurisdiction over the state’s air basins. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

The 1977 federal CAA Amendments required the EPA to identify national emissions standards for hazardous air pollutants (HAPs) to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal CAA Amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

State Regulations

California Environmental Protection Agency (CalEPA)

The mission of the California Environmental Protection Agency (CalEPA) is to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality. This is accomplished by developing, implementing, and enforcing environmental laws that regulate air, water and soil quality, pesticide use and waste recycling and reduction. Relevant to air quality, the CalEPA consists of the California Air Resources Board (CARB) and the Office Environmental Health Hazard Assessment (OEHHA).

In 2012, the Legislature passed Senate Bill (SB) 535, which targets disadvantaged communities in California for investment of proceeds from the State’s cap-and-trade program to improve public health, quality of life, and economic opportunity in California’s most burdened communities, while also reducing pollution. SB 535 directed that 25 percent of the proceeds from the Greenhouse Gas Reduction Fund go to projects that provide a benefit to disadvantaged communities. The legislation gave CalEPA responsibility for identifying those communities. In 2016, the Legislature passed Assembly Bill (AB) 1550, which now requires that 25 percent of proceeds from the fund be spent on projects located in disadvantaged communities. CalEPA has prepared a list of disadvantaged communities for the purpose

of SB 535 and CalEnviroScreen is a general mapping tool developed by OEHHA to help identify California communities that are most affected by sources of pollution.

The Project site and some of the vicinity are designated by CalEPA as being part of a disadvantaged community for the purpose of SB 535.

California Air Resource Board (CARB)

CARB is part of the California Environmental Protection Agency (CalEPA) and is responsible for overseeing the implementation of the California Clean Air Act (CCAA), meeting State requirements of the Federal Clean Air Act, and the establishment of State ambient air quality standards. Under the CCAA, areas are designated as non-attainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as non-attainment. Attainment status is shown in **Table 3**. CARB is also responsible for setting emission standards for vehicles sold in California and for other emissions-sources including consumer goods and off-road equipment. In general, these vehicle emissions standards are more restrictive than those established at the federal level. CARB also established passenger vehicle fuel specifications, that became effective in March 1996.

With regard to the Community Air Protection Program (CAPP) (AB 617), each year CARB's governing board (Board) is required to consider selecting communities for participation in the CAPP. Communities are selected for developing community air monitoring systems, emissions reduction programs, or both in order to improve air quality in their community. Over the first four years of the Program, the Board selected 17 communities where these focused actions are underway (CARB 2022a). The City of Jurupa Valley is not one of the selected communities, and to date has not been nominated to participate in the CAPP (CARB 2022b).

California also regulates toxic air contaminants (TACs) through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the Health and Safety Code (H&SC Sections 39660, et seq.) and Part 6 Air Toxics "Hot Spots" Information and Assessment (H&SC Sections 44300, et seq.). The CARB, working in conjunction with the OEHHA, identifies toxic air contaminants. Air toxic control measures may then be adopted to reduce ambient concentrations of the identified toxic air contaminant below a specific threshold based on its effects on health, or to the lowest concentration achievable through use of best available control technology for toxics (T-BACT). The program is administered by the CARB. Air quality control agencies, including the SCAQMD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by the CARB.

California Energy Code (California Code of Regulations, Title 24)

Energy Conservation Standards for new residential and commercial buildings were originally adopted by the California Energy Resources Conservation and Development Commission in June 1977 (Title 24 CCR Part 6 [CCR]). In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2012 Appliance Efficiency Regulations (Title 20 CCR §1601-1608) dated October 2012, were adopted by the California Energy Commission on January 12, 2012, and were effective as of February 1, 2013. The regulations include standards for both federally-regulated appliances and non-federally regulated appliances.

The 2019 Building Energy Efficiency Standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. The 2019 Building Energy Efficiency Standards will reduce energy use by seven and 30 percent for residential and non-residential buildings, respectively (CEC 2019). In December 2021, the 2022 Building Energy Efficiency Standards was approved and encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. The 2022 standards took effect January 1, 2023. (CEC 2021)

Regional Regulations

South Coast Air Quality Management District (SCAQMD)

The 1977 Lewis Air Quality Management Act merged four air pollution control district to create the SCAQMD to coordinate air quality planning efforts throughout Southern California. It is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards. Programs include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The SCAQMD monitors air quality over its jurisdiction of 10,743 square miles, including the Basin, which covers an area of 6,745 square miles. The Basin includes all of Orange County and portions of Los Angeles, Riverside, and San Bernardino counties. The SCAQMD also regulates the County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The SCAQMD has developed a variety of plans and rules aiming to improve air quality within the Basin, as discussed below (SCAQMD 2005, pp. 1-11 – 1-12).

Air Quality Management Plan

All areas designated as non-attainment under the CCAA are required to prepare plans showing how they will meet the air quality standards. The SCAQMD prepares the Air Quality Management Plan (AQMP) to address CAA and CCAA requirements by identifying policies and control measures.

SCAQMD updated its AQMP for the Basin in 2016, which included a new approach focusing on available, proven, and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The most effective way to reduce air pollution impacts on the health of the nearly 17 million residents within the Basin, including those in disproportionally impacted and environmental justice communities that are concentrated along transportation corridors and goods movement facilities, is to reduce emissions from mobile sources, the principal contributor to air quality challenges within the Basin. For that reason, the SCAQMD has been and will continue to be closely engaged with CARB and the EPA who have primary responsibility for these sources. The 2016 AQMP recognized the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to cleaner technologies in a manner that benefits not only air quality, but also local businesses and the regional economy. These “win-win” scenarios are key to implementation of the 2016 AQMP with broad support from a wide range of stakeholders. The 2016 AQMP included integrated strategies and measures to meet the NAAQS (SCAQMD 2016).

The control measures and related emission reduction estimates included in the 2016 AQMP are based on emissions projections for a future development scenario derived from land use, population, and employment estimates defined in consultation with local governments. To do this, the AQMP utilizes the population and growth estimates compiled by the Southern California Association of Governments (SCAG) in their 2016 Regional Transportation Plan/Sustainable Community Strategy (2016 RTP/SCS), the most recent RTP/SCS at the time (SCAQMD 2016). The latest AQMP was recently approved on December 2, 2022, by the SCAQMD Governing Board (SCAQMD 2022). The 2022 AQMP further helps the state to achieve air quality standard goals. Specifically, the 2022 AQMP strengthens the NAAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). The 2022 AQMP also developed requirements for the Basin and the Coachella Valley, both classified as "nonattainment," to meet the 2015 Ozone NAAQS standard.

SCAG's population and employment projections are based on the City's growth projections provided by cities, including from cities' general plans (SCAG 2016). Thus, since the 2016 AQMP is consistent with the 2016 RTP/SCS, the 2016 AQMP is also consistent with the growth assumptions cities include in their general plans. The latest RTP is the 2020-2045 Regional Transportation Plan/Sustainable Community Strategy known as SoCal Connect. (SCAG 2020.) The 2022 AQMP incorporated SoCal Connect strategies and population and employment projections. Should a project demonstrate compliance with local land use plans and/or population projections, then the AQMP would have taken into account such uses when it was developed and the project would not conflict with implementation of such a plan.

Rule 402

SCAQMD Rule 402 (Nuisance) prohibits the discharge of air containments in such quantities that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, but does not apply to odors emanating from agricultural operations necessary for growing of crops or the raising of fowl or animals (Rule 402).

Rule 403

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. The potential requirements include the application of water or chemical stabilizers to disturbed soils at least twice a day, covering all haul vehicles before transport of materials, restricting vehicle speeds on unpaved roads to 15 mph, and sweeping loose dirt from paved site access roadways used by construction vehicles. In addition, it is required to establish a vegetative ground cover on disturbance areas that are inactive within 30 days after active operations have ceased. Alternatively, an application of dust suppressants can be applied in sufficient quantity and frequency to maintain a stable surface. Rule 403 also requires grading and excavation activities to cease when winds exceed 25 mph (Rule 403). In addition, projects that disturb 50 or more acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD.

Rule 445

SCAQMD Rule 445 applies to reduce the emission of particulate matter from woodburning devices and establish contingency measures for applicable ozone standards for the reduction of volatile organic compounds.

Rule 481

SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment and requires all spray coating equipment to be (1) operated inside an approved control enclosure, (2) applied using high velocity-low pressure (HVLP), electrostatic and/or airless spray equipment, or (3) applied using which has an equal effectiveness to either of the two approved methods (Rule 481).

Rule 1108

SCAQMD Rule 1108 applies to cutback and emulsified asphalt used at project sites (Rule 1108).

Rule 1113

SCAQMD Rule 1113 governs the sale of architectural coatings and limits the volatile organic content (VOC) content in paints and paint solvents. This rule will dictate the VOC content of paints available for use during the construction of the buildings (Rule 1113).

Rule 1143

SCAQMD Rule 1143 aims to reduce emissions of VOCs from the use, storage, and disposal of consumer paint thinners and multi-purpose solvents commonly used in thinning of coating materials, cleaning of coating application equipment and other solvent cleaning operations by limiting their VOC content. Additionally, Rule 1143 requires several best management practices to reduce VOCs during use and application of paint thinners and other solvents. For example, this Rule requires containers to be closed when not in use. This Rule also establishes requirements for appropriate labelling and disclosure of contents for containers and storage areas of these corrosive, flammable substances (Rule 1143).

Rule 1186

SCAQMD Rule 1186 is intended to reduce the amount of particulate matter entrained in the ambient air as a result of vehicular traffic on paved and unpaved public roads, and at livestock operations. This includes requirements for local governments that contract for street sweeping services to utilize only certified street sweeping equipment (Rule 1186).

Rule 1303

SCAQMD Rule 1303 prohibits issuance of permits for any relocation or for any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia unless a best available control technology (BACT) is employed for the new or relocated source as specified by the Clean Air Act or other regulations (Rule 1303).

1.4. Emissions Estimates

1.4.1.Regional Significance Threshold Analysis

The thresholds contained in the *SCAQMD CEQA Air Quality Handbook* (SCAQMD 1993) and posted in a supplemental table as mass daily thresholds on SCAQMD's website[1] are considered regional thresholds and are shown in **Table 4 – SCAQMD CEQA Regional Significance Thresholds** below. These regional thresholds were developed for criteria pollutants based on the SCAQMD's treatment of a major stationary source.

Table 4 – SCAQMD CEQA Regional Significance Thresholds

Emission Threshold	Units	VOC	NO_X	CO	SO_X	PM-10	PM-2.5
Construction	lbs/day	75	100	550	150	150	55
Operations	lbs/day	55	55	550	150	150	55

Short-Term Analysis

Short-term emissions consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Short-term impacts will also include emissions generated during construction as a result of operation of personal vehicles by construction workers, asphalt degassing, and architectural coating (painting) operations.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, including but not limited to application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 or more acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of this Project's total disturbance area during mass grading (approximately 195 acres), a Fugitive Dust Control Plan or a Large Operation Notification Form will be required.

Short-term emissions from Project construction were evaluated using the CalEEMod version 2022.1 program. The estimated construction period for the proposed Project is anticipated to begin no sooner than June 2024 and will be phased. The default parameters within CalEEMod were used and these default values reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions. In addition to the default values used, assumptions relevant to model inputs for short-term construction emission estimates used are:

- Construction is anticipated to begin no earlier than June 2024. The Project will be developed in three consecutive phases. Phase 1 consists of mass grading of the entire Project site plus the

[1] http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2

grading of the off-site parcels totaling approximately 36 acres between the south Project boundary and Limonite Avenue and construction of: 398 single-family attached dwelling units (modeled a condo/townhouses), 185 single-family detached dwelling units (modeled as single-family housing), and 604 multi-family dwelling units modeled as low-rise apartments. Phase 2 consists of 174 single-family detached dwelling units (modeled as single-family housing) and 215 single-family attached dwelling units (modeled as condo/townhouses). Phase 3 consists of an elementary school overlay zone that is proposed to be built with a capacity of 700 students. Construction of each phase includes construction of the on-site roads, drainage facilities and underground wet and dry utility installation, as well as off-site road improvements to Pats Ranch Road. Construction phasing is shown below:

Phase 1

Construction Activity	Start Date	End Date	Total Working Days
Demolition	June 1, 2024	June 28, 2024	20 Days
Site Preparation	June 29, 2024	July 26, 2024	20 Days
Grading	July 27, 2024	December 13, 2024	100 Days
Building Construction	December 14, 2024	December 31, 2027	795 Days
Paving	December 14, 2024	February 7, 2025	40 Days
Architectural Coatings	April 14, 2025	December 31, 2027	710 Days

Phase 2

Construction Activity	Start Date	End Date	Total Working Days
Grading	January 1, 2028	February 11, 2028	30 Days
Building Construction	February 12, 2028	August 31, 2029	405 Days
Paving	February 12, 2028	March 10, 2028	20 Days
Architectural Coatings	May 13, 2028	August 31, 2029	340 Days

Phase 3

Construction Activity	Start Date	End Date	Total Working Days
Grading	January 1, 2030	January 28, 2030	20 days
Building Construction	January 29, 2030	July 31, 2031	393 Days
Paving	January 29, 2030	February 25, 2030	20 Days
Architectural Coatings	May 1, 2030	July 31, 2031	327 Days

- There are existing buildings on-site related to the existing agricultural use. These buildings, totaling 32,928 SF, will be demolished during Phase 1.
- The entire 153-acre Project site will be mass graded in Phase 1 with the approximate 36-acres on the TTM between the southern boundary and Limonite Avenue, and an additional six acres (approximately) will be disturbed for the construction off-site improvements, which includes storm water, potable water, recycled water and sewer line extensions from the existing facilities in Pats Ranch Road to the Project site and roadway frontage improvements between Limonite Avenue and Park Center Drive.

- The Project site, which includes the TTM boundary, will balance during mass grading in Phase 1 meaning no soil import or export will be required.
- Phase 2's footprint includes approximately four acres of off-site improvements to Pats Ranch Road between Park Center Drive and Bellegrave Avenue, which include storm water, potable water, recycled water and sewer lines extensions and roadway improvements along the Project frontage. Phase 3 does not include off-site road improvements, except the installation of a new traffic signal at the intersection of Bellegrave Avenue and Pats Ranch Road.
- Because the ultimate configuration of the VRSP is unknown, the paved area for each phase's development is assumed to be 25 percent of the total acreage of each land use in addition to the public right-of-way being dedicated in the TTM.
- The off-road equipment to be used for each activity is shown below and represents program defaults, updated by Project-specific information provided by the applicant. The equipment engineer tier represents CalEEMod defaults for the statewide fleet average emissions factors. Each piece of equipment is assumed to operate 8 hours per day:

Construction Activity	Off-Road Equipment	Unit Amount		
		Phase 1	Phase 2	Phase 3
Demolition	Excavators	3	0	0
	Rubber Tired Dozers	2	0	0
	Concrete/Industrial Saw	1	0	0
	Off-Highway Trucks[1]	1	0	0
Site Preparation	Tractors/Loaders/Backhoes	4	0	0
	Rubber Tired Dozers	3	0	0
	Off-Highway Trucks[1]	1	0	0
Grading	Excavators	0	2	1
	Graders	2	1	1
	Rubber Tired Dozers	2	2	1
	Tractors/Loaders/Backhoes	2	2	3
	Scrapers	12	3	2
	Crawler Tractor	3	0	0
	Off-Highway Trucks[1]	2	1	1
Building Construction	Cranes	2	2	1
	Forklifts	6	6	3
	Tractors/Loaders/Backhoes	6	6	3
	Welders	2	2	1
	Excavators	2	2	2
	Generator Sets	2	2	1
Paving	Pavers	3	2	2
	Paving Equipment	2	2	2
	Rollers	2	2	2
	Off-Highway Trucks[1]	1	1	1
Architectural Coatings	Air Compressors	2	2	1

Note: [1] Off-Highway trucks used to represent water trucks, operating two hours per day.

- To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the Project utilized the option of watering the Project site three times daily which achieves a control efficiency of 74 percent for PM-10 and PM-2.5 emissions.

The results of this analysis are shown in **Table 5 – Estimated Unmitigated Maximum Daily Construction Emissions**, below.

Table 5 – Estimated Unmitigated Maximum Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)[1]					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Phase 1						
2024	14.40	**139.00**	**115.00**	**0.27**	14.00	**7.79**
2025	**21.20**	40.70	106.00	0.10	**14.50**	4.18
2026	20.90	32.00	100.00	0.08	14.40	4.06
2027	20.60	30.40	95.10	0.08	14.30	3.97
Maximum	**21.20**	**139.00**	**115.00**	**0.27**	**14.50**	**7.79**
Exceeds Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**
Phase 2						
2028	**14.00**	**38.80**	**54.90**	**0.10**	**6.31**	**3.40**
2029	14.20	26.00	50.50	0.07	4.49	1.56
Maximum	**14.20**	**38.80**	**54.90**	**0.10**	**6.31**	**3.40**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Phase 3						
2030	**4.94**	**22.30**	29.40	**0.07**	**3.60**	**1.85**
2031	4.90	11.70	**19.00**	0.03	0.78	0.40
Maximum	**4.94**	**22.30**	**29.40**	**0.07**	**3.60**	**1.85**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: See Appendix A for model output report. Numbers are the maximum of summer or winter emissions in a given year and may not match due to rounding within the model.

As shown in **Table 5**, above, criteria pollutant emissions from construction for Phase 1 of the Project will exceed the SCAQMD regional daily thresholds for NO_X, but will not exceed the thresholds for VOC, CO, SO_2, PM-10, or PM-2.5. The main source of NO_X emissions are from on-road vehicle exhaust from construction equipment. Please see Section 1.5, Recommended Mitigation Measures, for mitigation that reduces the Project's construction emissions.

Long-Term Analysis

Long-term emissions are evaluated at build-out of a project. The Project is assumed to be fully operational in 2031. Mobile source emissions refer to on-road motor vehicle emissions generated from the Project's traffic and based on the Project-specific TIA (WEBB 2023). Weekend residential trip rates were obtained from the Institute of Transportation Engineers (ITE) Manual, 11th Edition. The TIA estimated the Project would generate a total of 13,334 trips per weekday, which includes an internal trip reduction credit of 126 trips related to the school. The TIA's internal capture trip credit was not applied to school trips, further providing a conservative analysis.

Area source emissions from the Project include stationary combustion emissions of natural gas used for space and water heating (shown in a separate row as energy), yard and landscape maintenance, consumer use of solvents and personal care products, and an average building square footage to be repainted each year. CalEEMod computes area source emissions based upon default factors and land use assumptions. CalEEMod contains the 2019 Title 24 energy efficiency standards. CalEEMod defaults were utilized except for fireplaces, which were assumed to be included in all residential units except for multi-family apartments and assumed to be natural gas burning per SCAQMD Rule 445.[2] Separate emissions were computed for both the summer and winter.

Evaluation of the data presented on the tables below indicates that criteria pollutant emissions from operation of this Project will exceed the SCAQMD regional daily thresholds during summer and winter for VOC, NO_X, and CO. Please see Section 1.5, Recommended Mitigation Measures, for mitigation that reduces the Project's operation emissions.

2 http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-445.pdf?sfvrsn=4

Table 6 – Estimated Unmitigated Daily Project Operation Emissions (Summer)

Source	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Phase 1						
Area	38.30	10.30	71.50	0.06	0.81	0.81
Energy	0.37	6.34	2.70	0.04	0.51	0.51
Mobile	43.40	56.80	555.00	1.53	54.90	10.50
Phase 1 Total	**82.07**	**73.44**	**629.20**	**1.63**	**56.22**	**11.82**
Phase 2						
Area	14.70	6.66	24.90	0.04	0.53	0.53
Energy	0.63	10.80	4.59	0.07	0.87	0.87
Mobile	14.80	18.80	192.00	0.56	20.80	3.95
Phase 2 Total	**30.13**	**36.26**	**221.49**	**0.67**	**22.20**	**5.35**
Phase 3						
Area	1.84	0.02	2.55	0.00	0.00	0.00
Energy	0.06	1.13	0.95	0.10	0.09	0.09
Mobile	5.46	5.67	59.70	0.17	6.70	1.27
Phase 3 Total	**7.36**	**6.82**	**63.20**	**0.27**	**6.79**	**1.36**
Project Total	**119.56**	**116.52**	**913.89**	**2.57**	**85.21**	**18.53**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

Table 7– Estimated Unmitigated Daily Project Operation Emissions (Winter)

Source	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Phase 1						
Area	32.40	9.67	4.12	0.06	0.78	0.78
Energy	0.37	6.34	2.70	0.04	0.51	0.51
Mobile	41.00	60.90	452.00	1.44	54.90	10.50
Phase 1 Total	**73.77**	**76.91**	**458.82**	**1.54**	**56.19**	**11.79**
Phase 2						
Area	12.70	6.45	2.75	0.04	0.52	0.52
Energy	0.63	10.80	4.59	0.07	0.09	0.87
Mobile	14.00	20.10	157.00	0.52	20.80	3.95
Phase 2 Total	**27.33**	**37.35**	**164.34**	**0.63**	**21.41**	**5.34**
Phase 3						
Area	1.42	0.00	0.00	0.00	0.00	0.00
Energy	0.06	1.13	0.95	0.01	0.09	0.09
Mobile	5.19	6.08	49.20	0.16	6.70	1.27
Phase 3 Total	**6.67**	**7.21**	**50.15**	**0.17**	**6.79**	**1.36**
Project Total	**107.77**	**121.47**	**673.31**	**2.34**	**84.39**	**18.49**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

1.4.2.Conclusion

Evaluation of the data presented on the above tables indicates that criteria pollutant emissions from construction of the Project will exceed SCAQMD thresholds for NO_X and operation of this Project will exceed the SCAQMD regional daily thresholds during summer and winter for VOC, NO_X, and CO. Please see Section 1.5, Recommended Mitigation Measures, for mitigation that reduces the Project's construction and operation emissions.

Although SCAQMD has not adopted thresholds of significance that apply to overlapping construction and operation emissions, **Table 8 – Combined Estimated Unmitigated Project Construction and Operation Emissions**, below, discloses the combined maximum daily emissions from these overlapping construction and operation emissions from the proposed Project for informational purposes based on the Project's construction schedule and phasing provided above.

Table 8 – Combined Estimated Unmitigated Project Construction and Operation Emissions

Activity	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
2024						
Phase 1-Construction	14.40	139.00	115.00	0.27	14.00	7.79
Maximum	**14.40**	**139.00**	**115.00**	**0.27**	**14.00**	**7.79**
2025						
Phase 1-Construction	21.20	40.70	106.00	0.08	14.50	4.18
Maximum[1]	**21.20**	**40.70**	**106.00**	**0.08**	**14.50**	**4.18**
2026						
Phase 1-Construction	20.90	31.40	100	0.08	14.40	4.06
Maximum[2]	**20.90**	**31.40**	**100**	**0.08**	**14.40**	**4.06**
2027						
Phase 1-Construction	20.60	30.40	95.10	0.08	14.30	3.97
Maximum[3]	**20.60**	**30.40**	**95.10**	**0.08**	**14.30**	**3.97**
2028						
Phase 1-Operations[1]	82.07	77.54	629.20	1.63	56.22	11.82
Phase 2-Construction	14.40	38.80	54.90	0.10	6.31	3.40
Maximum	**96.47**	**116.34**	**684.10**	**1.73**	**62.53**	**15.22**
2029						
Phase 1-Operations[1]	82.07	77.54	629.20	1.63	56.22	11.82
Phase 2-Construction	14.20	26.00	50.50	0.07	4.49	1.56
Maximum	**96.27**	**103.54**	**679.71**	**1.70**	**60.71**	**13.38**
2030						
Phase 1-Operations[1]	82.07	77.54	629.20	1.63	56.22	11.82
Phase 2-Operations[1]	30.13	37.56	221.49	0.67	22.22	5.35
Phase 3-Construction	4.94	22.30	29.40	0.07	3.60	1.85
Maximum	**35.07**	**59.86**	**250.89**	**0.74**	**25.80**	**7.20**
2031						
Phase 1-Operations[1]	82.07	77.54	629.20	1.63	56.22	11.82
Phase 2-Operations[1]	30.13	37.56	221.49	0.67	22.22	5.35
Phase 3-Construction	4.90	11.70	19.00	0.03	0.78	0.40
Maximum	**117.10**	**126.80**	**869.69**	**2.33**	**79.20**	**17.57**

Notes: [1] Daily Project operation emissions for Phase 1, Phase 2, and Phase 3 are the higher of the emissions that occur either during the summer or winter, from Table 6 and Table 7 above.

1.4.3.Localized Significance Threshold Analysis

Background

As part of the SCAQMD's environmental justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold (LST) methodology[3] that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short- and long-term) to sensitive receptors. SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The Project site is located within SRA 23.

Short-Term Analysis

According to the LST methodology, only on-site emissions need to be analyzed. (SCAQMD 2008). Emissions associated with hauling, vendor trips, and worker trips are mobile source emissions that occur off-site. The emissions analyzed under the LST methodology are NO_2, CO, PM-10, and PM-2.5. SCAQMD has provided LST lookup tables[4] to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. The LST methodology and tables can be used as a screening tool to determine if dispersion modeling would be necessary.

The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.[5] Based on this SCAQMD guidance and the Project's equipment list during grading (above), Phase 1 will disturb approximately 16.5 acres per day, Phase 2 will disturb approximately 6.5 acres per day, and Phase 3 will disturb approximately 5 acres per day during grading. Although disturbance in Phase 1 and Phase 2 of the Project exceed five acres per day, per SCAQMD, the LST threshold and tables can be used as a screening tool to determine if dispersion modeling would be necessary. Therefore, the Project's on-site emissions from CalEEMod and LST-Look-Up Tables for the 5-acre site were utilized as a screening-level analysis.

The LST are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). The closest sensitive receptors are existing residential properties located across Pats Ranch Road to the east of the Project site, shown on **Figure 5 – Sensitive Receptors**. The closest receptor distance on the LST look-up tables is 25 meters. According to LST methodology, projects with boundaries closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. Therefore, a receptor distance of 25 meters (85 feet) was used to ensure a conservative analysis. The results are summarized below.

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[3] South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, Revised July 2008. (Available at **http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds**, accessed January 2023.)

[4] *Ibid.*

[5] **http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2**

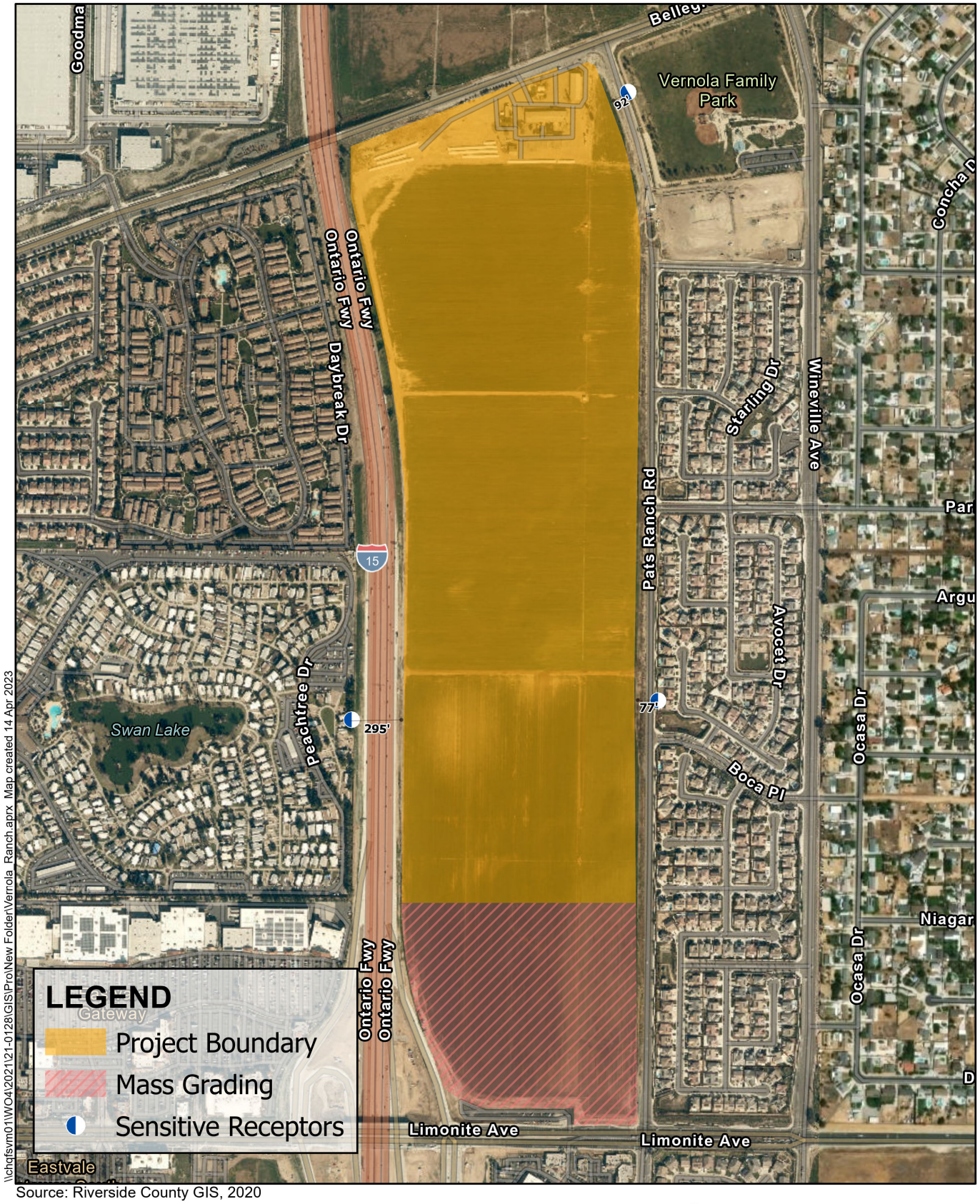
Table 9 – Unmitigated LST Results for Construction Emissions

Activity	Peak Daily Emissions (lb/day)			
	NO_X	CO	PM-10	PM-2.5
LST for 5-acre site at 25 meters	**270**	**1,577**	**13**	**8**
Phase 1				
Demolition 2024	25.70	22.50	2.14	1.16
Site Preparation 2025	36.70	33.70	6.74	4.13
Grading 2024	**139.00**	**111.00**	**13.33**	**7.62**
Building Construction and Paving 2024	34.50	41.30	1.58	1.45
Building Construction and Paving 2025	32.33	41.10	1.39	1.28
Building Construction and Coating 2025	24.95	31.34	1.00	0.93
Building Construction and Coating 2026	23.58	31.12	0.88	0.81
Building Construction and Coating 2027	22.52	31.10	0.78	0.72
Maximum	**139.00**	**111.00**	**13.33**	**7.62**
Exceeds Threshold?	**No**	**No**	**Yes**	**No**
Phase 2				
Grading 2028	**38.70**	40.90	**5.95**	**3.32**
Building Construction and Paving 2028	30.25	**43.50**	1.03	0.94
Building Construction and Architectural Coating 2028	24.66	35.08	0.77	0.71
Building Construction and Architectural Coating 2029	23.92	35.07	0.70	0.65
Maximum	**38.70**	**43.50**	**5.95**	**3.32**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Activity	Peak Daily Emissions (lb/day)			
	NO_X	CO	PM-10	PM-2.5
LST for 5-acre site at 25 meters	**270**	**1,577**	**13**	**8**
Phase 3				
Grading 2030	**22.30**	**28.50**	**3.30**	**1.79**
Building Construction 2030	10.70	16.00	0.31	0.29
Building Construction and Paving 2030	14.47	26.60	0.55	0.51
Building Construction and Architectural Coating 2030	11.75	17.48	0.32	0.30
Building Construction and Architectural Coating 2031	11.44	17.37	0.300	0.28
Maximum	**22.30**	**28.50**	**3.30**	**1.79**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: Maximum emissions reported are the greater of either summer or winter emissions.

As shown in **Table 9**, emissions from construction of the Project will be below the LST established by SCAQMD for the Project for all phases except for PM-10 emissions during grading in Phase 1. The PM-10 emissions slightly exceed the threshold; however, the mitigation recommended to reduce regional emissions during Phase 1 grading shown in **Table 5**, above, will also reduce localized PM-10 emissions. Please see Section 1.5, Recommended Mitigation Measures, for mitigation that reduces the Project's localized PM-10 emissions.



Source: Riverside County GIS, 2020

0 100 200 300 Feet

Figure 5 - Sensitive Receptors

Vernola Ranch Specific Plan
Air Quality and Greenhouse Gas Impact Report

ALBERT A. WEBB ASSOCIATES

Long-Term Analysis
This Project involves the construction of a residential development with a potential school overlay. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site, such as warehouse/transfer facilities. The proposed Project does not include such uses. Therefore, due to the lack of stationary source emissions or on-site mobile equipment, no long-term LST analysis is needed.

1.4.4.Conclusion

Based on the LST analysis, the short-term construction of the Project will result in localized air quality impacts to sensitive receptors within the Project vicinity during construction of Phase 1. Due to the lack of any new long-term source of emissions, no new long-term localized impacts will occur. Please see Section 1.5, Recommended Mitigation Measures, for mitigation that reduces the Project's localized PM-10 emissions.

CO Hot Spots Analysis
A carbon monoxide (CO) "hot spot" is a localized concentration of CO that is above the state or federal 1-hour or 8-hour ambient air quality standards (AAQS). Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles.

Based on the information presented below, a CO "hot spot" analysis is not needed to determine whether the addition of Project related traffic will contribute to an exceedance of either the state or federal AAQS for CO emissions in the Project area.

The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP)[6] and the Revised 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan).[7] As discussed in the 2003 AQMP, peak carbon monoxide concentrations reported in the 1992 CO Plan in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections (2003 AQMP Appendix V, p. V-4-32). Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of the 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Blvd. and Imperial Highway (Lynwood); Wilshire Blvd. and Veteran Ave. (Westwood); Sunset Blvd. and Highland Ave. (Hollywood); and La Cienega Blvd. and Century Blvd. (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated in the 1992 CO Plan and subsequent 2003 AQMP was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day (2003 AQMP Appendix V, Table 4-7). The Los Angeles County

6 SCAQMD, *2003 Air Quality Management Plan, August 1, 2003.* (Available at **http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp**, accessed January 2023.)

7 SCAQMD, *Revision to the 1992 Carbon Monoxide Attainment Plan*, September 1994. (Available at SCAQMD.)

Metropolitan Transportation Authority (MTA)[8] evaluated the Level of Service (LOS) in the vicinity of the Wilshire Blvd./Veteran Ave. intersection and found it to be level E at peak morning traffic and Level F at peak afternoon traffic (MTA, Exhibit 2-5 and 2-6). The hot spot analysis was conducted at intersections subject to extremes in vehicle volumes and vehicle congestion, and did not predict any violation of CO standards. Considering Project-related traffic in the General Plan horizon year of 2040, the highest average daily trips would be approximately 49,261 on Limonite Avenue between Wineville Avenue and Pats Ranch Road, which is lower than the values studied by SCAQMD (WEBB 2023). Therefore, it can reasonably be concluded that Project-related traffic would not have daily traffic volumes exceeding those at the intersections modeled in the 2003 AQMP, nor would there be any reason unique to the meteorology to conclude that intersections affected by the Project would yield higher CO concentrations if modeled in detail. Thus, the Project would not result in CO hot spots.

1.5. Recommended Mitigation Measures

In order to reduce NO_X and PM-10 emissions from Phase 1 Project construction of the VRSP, the following mitigation measure is recommended:

MM AQ 1: During mass grading activities within Phase 1, the following heavy-duty construction equipment shall be certified to meet or exceed the following United States Environmental Protection Agency (USEPA) Tier 4 Final standards: crawler tractors, graders, rubber tired dozers, and tractor/loader/backhoes. At least one Scraper shall meet or exceed USEPA Tier 4 Interim standards. Proof of compliance shall be reviewed by the City of Jurupa Valley Public Works and Engineering Department prior to issuance of a grading permit. An exemption from these requirements shall be granted by the City in the event that the applicant documents that (1) equipment with the required tier is not reasonably available (e.g., reasonability factors to be considered include those available within Riverside/San Bernardino County within the scheduled construction period), and (2) corresponding reductions in criteria pollutant emissions are achieved from other available construction equipment.

In order to reduce VOC, NO_X, and CO emissions from Project operation the following mitigation measures are recommended:

MM AQ 2: The City Public Works and Engineering Department shall verify before issuance of all residential building permits that where appliances are installed by residential project developers, Energy Star-rated appliances (or other equivalent technology) for clothes washers, dish washers, refrigerators, and ceiling fans shall be installed in the residences.

MM AQ 3: The City Building and Safety Department shall verify before issuance of all residential and non-residential building permits that all in-unit fixtures installed in residential and nonresidential buildings will be high efficacy. High efficacy lighting includes compact fluorescent lamps (CFLs), light emitting diodes (LED), and other light bulbs that provide an energy efficiency of at least 40 lumens/watt for 15 watt or less fixtures, 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40 watts.

8 Metropolitan Transportation Authority, *2004 Congestion Management Plan for Los Angeles County*, Adopted July 22, 2004. (Available at **http://libraryarchives.metro.net/congestion-management-program-lacmta/2004-congestion-management-program.pdf**, accessed January 2023.)

MM AQ 4: Upon a residential dwelling unit being sold, offered for sale or rented, the Project Applicant or its designee shall notify and offer to the prospective buyer or tenant, as soon as it may be done, disclosure materials describing available public transit, ridesharing and non-motorized commuting opportunities available in the vicinity of the Project. Such information shall be transmitted no later than the close of escrow or finalization of a rental contract. A draft of this disclosure shall be submitted to the City of Jurupa Valley Planning Department for review prior to the issuance of the first certificate of occupancy.

MM AQ 5: The Project developers shall install broadband infrastructure or other communication technologies that encourage telecommuting and working from home, which reduces mobile source emissions. The applicant shall submit documentation to the City Building and Safety Department prior to occupancy.

MM AQ 6: The Project developers shall offer electrical outlets on patios, which reduces area source emissions. The City Planning Department shall verify architectural plans for implementing tract maps include such requirements before implementing project approval.

1.5.1. Impacts After Mitigation

Implementation of mitigation measures **MM AQ 1** will reduce the Project's short-term construction-related emissions of NO_X and PM-10 and the operational emissions of VOC, NO_X and CO emissions. **MM AQ 1** has quantitative reductions associated with it available in CalEEMod. The mitigated emissions are shown in **Table 10**, below, and indicate that NO_X emissions from grading activities in Phase 1 will be reduced below the SCAQMD thresholds.

Table 10 – Mitigated Estimated Maximum Daily Construction Emissions

Activity/Year	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Phase 1	21.20	99.50	116.00	0.27	14.50	5.75
Phase 2[1]	14.20	38.80	54.90	0.10	6.31	3.40
Phase 3[1]	4.94	22.30	29.40	0.07	3.60	1.85
Maximum	**21.20**	**99.50**	**116.00**	**0.27**	**14.50**	**5.75**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Note: [1] Phase 2 and Phase 3 totals from Table 5, above.

Implementation of **MM AQ 1** also results in reductions in construction PM-10 emissions in the Phase 1 LST analysis, as shown in **Table 11**, below and indicate that PM-10 emissions from grading activities in Phase 1 will be reduced below the SCAQMD LST.

Table 11 – LST Phase 1 Mitigated Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)			
	NO_X	CO	PM-10	PM-2.5
LST for 5-acre site at 25 meters	**270**	**1,577**	**13**	**8**
Phase 1				
Demolition 2024[1]	25.70	22.50	2.14	1.16
Site Preparation 2025[1]	36.70	33.70	6.74	4.13
Grading 2024	**99.20**	**111.00**	**11.09**	**5.58**
Building Construction and Paving 2024[1]	34.50	41.30	1.58	1.45
Building Construction and Paving 2025[1]	32.33	41.10	1.39	1.28
Building Construction and Coating 2025[1]	24.95	31.34	1.00	0.93
Building Construction and Coating 2026[1]	23.58	31.12	0.88	0.81
Building Construction and Coating 2027[1]	22.52	31.10	0.78	0.72
Maximum	**99.20**	**111.00**	**11.09**	**5.58**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: Maximum emissions reported are the greater of either summer or winter emissions.

[1] Unmitigated totals from Table 9, above.

Implementation of **MM AQ 2** through **MM AQ 6** aim to reduce operational emissions of VOC, NO_X, and CO; however, **MM AQ 2** through **MM AQ 6** do not have quantitative reductions associated with them available in CalEEMod and given that the majority of Project-generated emissions are from mobile sources from resident's vehicle usage, the emissions are outside the jurisdiction and control of the Project applicant and City. Although mitigation measures **MM AQ 2** through **MM AQ 6** will serve to potentially reduce transportation- and energy-related emissions, the reductions will not reduce emissions below applicable thresholds for criteria pollutants. Beyond those already presented, there are no feasible measures to substantially reduce operational emissions or reduce emissions below applicable thresholds.

1.6. Findings and Conclusions

1.6.1. Evaluation of Thresholds

The following thresholds and discussion were included in this study to assist in the Project's evaluation of impacts under CEQA:

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

The SCAQMD is responsible for comprehensive air pollution control within the Basin and prepares the AQMP for the Basin. The AQMP sets forth a comprehensive program that will lead the Basin into compliance with all federal and state air quality standards. The AQMPs control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments (SCAQMD 2022). Accordingly, if a project demonstrates compliance with local land use

plans and/or population projections, then the AQMP would have taken into account such uses when it was developed.

The Project site is currently zoned within the Specific Plan for medium density residential (Planning Areas 10, 13, & 15) and industrial park (Planning Area 20). The Project applicant proposes to amend these designations and increase the overall density of the site, which would not have been considered in the AQMP. However, consistency with the 2022 AQMP is also a function of consistency with applicable AQMP control measures. The AQMP includes specific control measures to reduce air pollutant emissions in order meet federal and state air quality standards. Even though the anticipated growth from the proposed Project would exceed the growth projections in the AQMP, the control measures contained within the 2022 AQMP will still apply to new development, and through this compliance, the future development on the Project will not obstruct implementation of the 2022 AQMP. Such control measures include, for example, further reductions from residential and commercial water heating, space heating, cooking devices, and other combustion sources. (SCAQMD 2022, p. 4-12). Moreover, the mobile source control measures in the 2022 AQMP were based on a variety of control technologies that focus on accelerated retrofits or replacement of existing vehicles or equipment, acceleration of vehicle turnover through voluntary vehicle retirement programs, and greater use of cleaner fuels. The measures also encourage greater deployment of low-NO_X and zero-emission vehicle and equipment technologies such as plug-in hybrids, battery-electric, and fuel cells. (SCAQMD 2022, pp. 4- 21 – 4-23). The control measures are implemented by applicable agencies and the development that will result from the proposed Project will be subject to all applicable measures.

The proposed Project would not obstruct implementation of the control measures contained within the 2022 AQMP. However, the Project is not consistent with growth projections which were used in the 2022 AQMP. As a result, the Project may conflict with the 2022 AQMP and the Project's impacts in this regard are potentially significant and no feasible mitigation measures exist to reduce the Project's GHG emissions.

- 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?

The portion of the Basin within which the proposed Project site is located is designated as a non-attainment area for PM-10 under state standards, and for ozone and PM-2.5 under both state and federal standards. The SCAQMD considers the thresholds for project-specific impacts and cumulative impacts to be the same (SCAQMD 2003). Therefore, projects that exceed project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. Based on the SCAQMD's regulatory jurisdiction over regional air quality in the Basin, it is reasonable to rely on its thresholds to determine whether there is a cumulative air quality impact.

The short-term regional and localized construction emissions from this Project were modeled and as shown in **Table 5** above, the emissions from construction of the Project are below the SCAQMD daily regional construction thresholds for all the criteria pollutants, except Phase 1 Grading. As shown in **Table 9**, the localized PM-10 emissions slightly exceed the threshold. However, as shown in **Table 10** and **Table 11**, with implementation of **MM AQ 1**, the Project's construction emissions will be reduced below the applicable SCAQMD thresholds and will be reduced to a less than significant level.

Evaluation of the data presented in **Table 6** and **Table 7** above indicates that criteria pollutant emissions from operation of this Project will exceed the SCAQMD regional daily thresholds for VOC, NO_X and CO during summer and winter. Implementation of **MM AQ 2** through **MM AQ 6** aim to reduce operational

emissions of VOC, NO_X, and CO; however, **MM AQ 2** through **MM AQ 6** do not have quantitative reductions associated with them available in CalEEMod and given that the majority of Project-generated emissions are from mobile sources from resident's vehicle usage, the emissions are outside the jurisdiction and control of the Project and City. Although mitigation measures **MM AQ 2** through **MM AQ 6** will serve to potentially reduce transportation- and energy-related emissions, the reductions will not reduce emissions below applicable thresholds for criteria pollutants. Beyond those already presented, there are no feasible measures to substantially reduce operational emissions or reduce emission below applicable thresholds.

As such, the Project will potentially result in a cumulatively considerable net increase of criteria pollutants for which the Project region is in non-attainment.

- Expose sensitive receptors to substantial pollutant concentrations?

As shown in **Table 9**, the localized PM-10 emissions from Project construction will slightly exceed the threshold. However, as shown in **Table 11**, with implementation of **MM AQ 1**, the Project's construction emissions will be reduced below the applicable SCAQMD thresholds and will be reduced to a less than significant level. The Project does not result in any long-term stationary source emissions and thus will not result in long-term localized impacts. Additionally, the Project will not generate any CO hot spots. Therefore, the Project will not expose sensitive receptors to substantial pollutant concentrations.

In December 2018, in the case of Sierra Club v. County of Fresno (2018) 6 Cal.5th 502, the California Supreme Court held that an EIR's air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided. As noted in the Brief of Amicus Curiae by the SCAQMD in the Friant Ranch case (cited herein as SCAQMD 2015 and referred to as the "Brief"), SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on how lead agencies should correlate air quality impacts with specific health outcomes.

The Brief cites the author of the CARB methodology, which reported that a PM-2.5 methodology is not suited for small projects and may yield unreliable results. Similarly, SCAQMD staff does not currently know of a way to accurately quantify O_3-related health impacts caused by NO_X or VOC emissions from relatively small projects, due to photochemistry and regional model limitations. The Brief concludes, with respect to the Friant Ranch EIR, that although it may have been technically possible to plug the data into a methodology, the results would not have been reliable or meaningful.

On the other hand, for extremely large regional projects (unlike the proposed Project), the SCAQMD states that it has been able to correlate potential health outcomes for very large emissions sources – as part of their rulemaking activity, specifically 6,620 lbs./day of NO_X and 89,180 lbs./day of VOC were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to O_3.

The proposed Project does not generate anywhere near 6,620 lbs/day of NO_X or 89,190 lbs/day of VOC emissions. The proposed Project would generate up to 99.50 lbs/day of NO_X during construction (after mitigation) and 121.47 lbs/day of NO_X during operations (1.50% and 1.83% of 6,620 lbs/day, respectively). Additionally, the proposed Project would also generate a maximum of 21.20 lbs/day of VOC emissions during construction and 119.56 lbs/day of VOC emissions during operations (0.02% and 0.13% of 89,190 lbs/day, respectively). Therefore, the proposed Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level.

Notwithstanding, this analysis does evaluate the proposed Project's localized impact to air quality for emissions of CO, NO_X, PM-10, and PM-2.5 by comparing the proposed Project's on-site emissions to the SCAQMD's applicable LST thresholds. As evaluated herein, the proposed Project would not result in emissions that exceeded the SCAQMD's LSTs. Therefore, the proposed Project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NO_X, PM-10, and PM-2.5.

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

The proposed Project presents the potential to result in other emissions, such as those leading to odors in the form of diesel exhaust during construction in the immediate vicinity of the proposed Project site. The closest sensitive receptors to the Project construction site are the existing residential properties on Pats Ranch Road, adjacent to and east of the Project Site. However, odors generated during construction will be short-term and will not result in a long-term odorous impact to the surrounding area.

Additionally, CARB's Air Quality and Land Use Handbook outlines common sources of odor complaints, including: sewage treatment plants, landfills, recycling facilities, and petroleum refineries (CARB 2005). The Project applicant proposes residential homes and a school overlay, which is not included on the CARB's list of facilities that are known to be prone to generate odors. Therefore, impacts are less than significant.

2. Greenhouse Gas Analysis

2.1. Background

The earth's natural warming process is known as the "greenhouse effect." Certain atmospheric gases act as an insulating blanket for solar energy to keep the global average temperature in a suitable range. These gases are called "greenhouse gases" because they trap heat like the glass walls of a greenhouse. The greenhouse effect raises the temperature of the earth's surface by about 60 degrees Fahrenheit. With the natural greenhouse effect, the average temperature of the earth is about 45 degrees Fahrenheit; without it, the earth would be about minus 15 degrees. It is normal for the earth's temperature to fluctuate over extended periods of time. Over the past one hundred years, however, the earth's average global temperature has generally increased by one degree Fahrenheit. In some regions of the world, the increase has been as much as four degrees Fahrenheit.

Scientists studying the particularly swift rise in global temperatures during the late twentieth century believe that natural variability alone does not account for that rise. Rather, human activity spawned by the industrial revolution has resulted in increased emissions of carbon dioxide and other forms of GHGs, primarily from the burning of fossil fuels (during motorized transport, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.) and deforestation, as well as agricultural activity and the decomposition of solid waste. The most common GHG is carbon dioxide (CO_2), which constitutes approximately 84 percent of all GHG emissions in California (CEC 2006). Worldwide, the State of California ranks as the 12th to 16th largest emitter of CO_2 and is responsible for approximately two percent of the world's CO_2 emissions. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect (CEC 2006). While the increase in temperature is known as "global warming," the resulting change in weather patterns is known as "global climate change." Global climate change is evidenced in changes to wind patterns, storms, precipitation, and air temperature.

Global climate change is, by definition, a global issue and California's efforts to reduce GHG emissions will not alone change the impact of global climate change. Global concentrations of GHG rather than locational GHG emissions result in adverse climate change impacts that differentially occur throughout the world, and specific scientific metrics and methodologies to measure the climate change consequences (if any) of locally-specific impacts remain subject to considerable scientific uncertainty. For example, California emits only a tiny fraction of global GHG. The whole of the California economy's GHG emissions have dropped from approximately 1.35 percent of global GHG emissions in 1990 to 0.98 percent in 2011. As previous Governor Brown once noted about California's GHG reduction efforts, "we can do things in California, but if others don't follow, it will be futile." Thus, reducing California's GHG emissions (even as the 8th eighth largest economy in the world) cannot meaningfully impact the quantity of GHGs in the global atmosphere. To date, the vast majority of other states and nations have not followed California's lead in mandating GHG emission reductions across a broad spectrum of economic sectors under laws and regulations discussed in greater detail below and have not enacted regulations similar to those adopted in California. California already has nearly the lowest level of GHG per capita of any state.

Project-level emissions for activities that occur because of population-based variables (people needing housing, jobs, and services) that occur in California reduces global GHG emissions by facilitating more growth and development in California relative to other states.

Greenhouse Gases

Gases responsible for global climate change in the South Coast Air Basin (Basin) and their relative contribution to the overall warming effect are carbon dioxide (55 percent), chlorofluorocarbons (CFCs) (24 percent), methane (15 percent), and nitrous oxide (6 percent). It is widely accepted that continued increases in GHG will contribute to global climate change although there is uncertainty concerning the magnitude and timing of future emissions and the resultant warming trend (SCAQMD 2005).

"Stratospheric ozone depletion" refers to the slow destruction of naturally occurring ozone, which lies in the upper atmosphere (called the stratosphere) and which protects Earth from the damaging effects of solar ultraviolet radiation. Certain compounds, including CFCs, halons, carbon tetrachloride, methyl chloroform, and other halogenated compounds, accumulate in the lower atmosphere and then gradually migrate into the stratosphere. In the stratosphere, these compounds participate in complex chemical reactions to destroy the upper ozone layer. Destruction of the ozone layer increases the penetration of ultraviolet radiation to the Earth's surface, a known risk factor that can increase the incidence of skin cancers and cataracts, contribute to crop, and fish damage, and further degrade air quality (SCAQMD 2005).

GHG and ozone-depleting gases include, but are not limited to, the following:

- **Carbon dioxide –** Carbon dioxide results from fossil fuel combustion in stationary and mobile sources. It contributes to the greenhouse effect, but not to stratospheric ozone depletion. In the Basin, approximately 48 percent of carbon dioxide emissions come from transportation, residential and utility sources which contribute approximately 13 percent each, 20 percent come from industry, and the remainder comes from a variety of other sources (SCAQMD 2005).
- **Methane –** Atmospheric methane is emitted from both non-biogenic and biogenic sources. Non-biogenic sources include fossil fuel mining and burning, biomass burning, waste treatment, geologic sources, and leaks in natural gas pipelines. Biogenic sources include wetlands, rice agriculture, livestock, landfills, forest, oceans, and termites. Methane sources can also be divided into anthropogenic and natural. Anthropogenic sources include rice agriculture, livestock, landfills, waste treatment, some biomass burning, and fossil fuel combustion. Natural sources are wetlands, oceans, forests, fire, termites, and geological sources. Anthropogenic sources currently account for more than 60 percent of the total global emissions. It is a greenhouse gas and traps heat 40 to 70 times more effectively than carbon dioxide. In the Basin, more than 50 percent of human-induced methane emissions come from natural gas pipelines, while landfills contribute 24 percent. Methane emissions from landfills are reduced by SCAQMD Rule 1150.1 – Control of Gaseous Emissions from Active Landfills. Methane emissions from petroleum sources are reduced by a number of rules in SCAQMD Regulation XI that control fugitive emissions from petroleum production, refining, and distribution (SCAQMD 2005).
- **Other regulated greenhouse gases include Nitrous Oxide, Sulfur Hexafluoride, Hydrofluorocarbons, and Perfluorocarbons** – These gases all possess heat-trapping potentials hundreds to thousands of times more effective than carbon dioxide. Emission sources of nitrous oxide gases include, but are not limited to, waste combustion, wastewater treatment, fossil fuel combustion, and fertilizer production. Because the volume of emissions is small, the net effect of nitrous oxide emissions relative to carbon dioxide or methane is relatively small. Sulfur hexafluoride, hydrofluorocarbon, and perfluorocarbon emissions occur at even lower rates.
- **Chlorofluorocarbons** – Chlorofluorocarbons (CFCs) are emitted from blowing agents used in producing foam insulation. They are also used in air conditioners and refrigerators and as solvents to clean electronic microcircuits. CFCs are primary contributors to stratospheric ozone depletion and to global warming. 63 percent of CFC emissions in the Basin come from the

industrial sector. Federal regulations require service practices that maximize recycling of ozone-depleting compounds (both CFCs, hydro-chlorofluorocarbons, and their blends) during the servicing and disposal of air-conditioning and refrigeration equipment. SCAQMD Rule 1415 – Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems requires CFC refrigerants to be reclaimed or recycled from stationary refrigeration and air conditioning systems. SCAQMD Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigant Processes requires recovery of reclamation of CFCs at certain commercial facilities and eliminates the use of some CFCs in the sterilization processes. Some CFCs are classified as Toxic Air Contaminants (TACs) and regulated by SCAQMD Rule 1401 – New Source Review of Toxic Air Contaminants and SCAQMD Rule 1402 Control of Toxic Air Contaminants from Existing Sources.

- **Halons –** These compounds are used in fire extinguishers and behave as both ozone-depleting and GHG. Halon production ended in the United States in 1993. SCAQMD Rule 1418 – Halon Emissions from Fire Extinguishing Equipment requires the recovery and recycling of halons used in fire extinguishing systems and prohibits the sale of halon in small fire extinguishers.
- **Hydro-chlorofluorocarbons –** HCFCs are solvents, similar in use and chemical composition to CFCs. The hydrogen component makes HCFCs more chemically reactive than CFCs, allowing them to break down more quickly in the atmosphere. These compounds deplete the stratospheric ozone layer, but to a much lesser extent than CFCs. HCFCs are regulated under the same SCAQMD rules as CFCs.
- **1,1,1-trichloroethane (TCA) –** TCA (methyl chloroform) is a solvent and cleaning agent commonly used by manufacturers. It is less destructive on the environment than CFCs or HCFCs, but its continued use will contribute to global warming and ozone depletion. 1,1,1-trichloroethane (TCA) is a synthetic chemical that does not occur naturally in the environment. No TCA is supposed to be manufactured for domestic use in the United States after January 1, 2002 because it affects the ozone layer. TCA had many industrial and household uses, including use as a solvent to dissolve other substances, such as glues and paints; to remove oil or grease from manufactured metal parts; and as an ingredient of household products such as spot cleaners, glues, and aerosol sprays. SCAQMD regulates this compound as a toxic air contaminant under Rules 1401 and 1402.

Unlike criteria air pollutants and TACs, which are pollutants of regional and local concern, climate change is a global problem and GHGs are global pollutants. Impacts of GHG emissions are a function of their total atmospheric concentration and most GHGs are globally well mixed atmospheric constituents. This means that the location of a particular GHG emission, in contrast to the situation for criteria pollutants, does not change its environmental impact.

2.1.1.Global Warming Potential

Individual GHGs have varying global warming potential and atmospheric lifetimes. The Intergovernmental Panel on Climate Change (IPCC) developed the Global Warming Potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of individual GHGs is determined through a comparison with the GWP of CO_2. CO_2 has a GWP of one; CH_4 has a GWP of 28, meaning that on a molecule by molecule basis, CH_4 has 28 times the global warming potential of CO_2. CO_2-equivalents (CO_2e) are the emissions of a GHG multiplied by the GWP. The CalEEMod program calculates the CO_2e based on the GWPs reported in the IPCC Fifth Assessment Report (IPCC 2013). The Synthesis Report for the Sixth Assessment Report was recently finalized in March 2023. **Table 12 – Global Warming Potentials and Atmospheric Lifetimes** shows the GWP and

atmospheric lifetimes of various GHGs with relatively long atmospheric lifetimes from the IPCC 2013 report.

Table 12 – Global Warming Potentials and Atmospheric Lifetimes

Gas	Atmospheric Lifetime	Global Warming Potential (100-Year Time Horizon)
Carbon Dioxide (CO_2)	--	1
Methane (CH_4)	12.4	28
Nitrous Oxide (N_2O)	121	265-298
Hydrofluorocarbons (HFCs) HFC-134a	13.4	1,300-1,550
Perfluoromethane (CF_4)	50,000	6,630-7,350
Chlorofluorocarbons (CFCs) CFC-11	45	4,660-5,350

Source: Intergovernmental Panel on Climate Change, Fifth Assessment Report, *Climate Change 2013– The Physical Science Basis*, 2013, Table 8.7

Effects of Climate Change

Agriculture

Global climate change can cause drought, higher temperatures, saltwater contamination through rising sea levels, flooding, and increased risk of pests. Because California feeds not only its own residents, but the entire U.S. and other countries as well, production declines could lead to food shortages and higher prices. (OAG 2022)

Forest and Biodiversity

Forest and rangelands cover over 80% of California's 100 million acres. Climate change will affect tree survival and growth, reducing these lands' productivity and changing their habitats. In addition, climate change makes forests more vulnerable to fires by increasing temperatures and making forests and brush drier. Today's fire season in the western United States starts earlier, lasts longer, and is more intense than in the last several decades. Wildfire occurrence statewide could increase several fold by the end of the century, increasing fire suppression and emergency response costs and damage to property. (OAG 2022)

California is one of the most biologically diverse regions of the world, with the highest number of unique plant and animal species of all 50 states and the greatest number of endangered species. Climate change will adversely affect plant and wildlife habitats and the ability of the State's varied ecosystems to support clean water, wildlife, fish, timber and other goods and services. (OAG 2022)

Public Health

Californians already experience the worst air quality in the nation. Hotter temperatures lead to more smog, which can damage lungs, and increases childhood asthma, respiratory and heart disease, and death. Certain segments of the population are at greater risk, including the elderly, infants, persons with chronic heart or lung disease, people who cannot afford air conditioning, and those who work outdoors. As temperatures rise, the number of days of extreme heat events also will rise, causing increases in the risk of injury or death from dehydration, heatstroke, heart attack and respiratory problems. (OAG 2022)

Sea Level Rise

The sea level along California's coasts has risen nearly eight inches in the past century and is projected to rise by as much as 20 to 55 inches by the end of the century. A 55-inch sea level rise could put nearly half a million people at risk of flooding by 2100, and threaten property and infrastructure, including roadways, buildings, hazardous waste sites, power plants, and parks and tourist destinations. (OAG 2022)

As sea levels rise, saltwater contamination of the State's delta and levee systems will increase. Saltwater contamination of the Sacramento/San Joaquin Delta will threaten wildlife and the source of drinking water for 20 million Californians. Farmland in low areas may also be harmed by salt-contaminated water. (OAG 2022)

Water Resources

The Sierra Nevada snowpack functions as the most important natural reservoir of water in California. Under current conditions, the snowpack is created in fall and winter and slowly releases about 15 million acre-feet of water in the spring and summer, when California needs it most. California's dams and water storage facilities are built to handle the snow melt as it happened in the past. Higher temperatures are now causing the snowpack to melt earlier and all at once. Earlier and larger releases of water could overwhelm California's water storage facilities, creating risk of floods and water shortages. (OAG 2022)

2.2. Regulatory Setting

2.2.1. Federal

Previously the U.S. EPA (USEPA) had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438 (2007)), however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the USEPA to decide whether the gases endangered public health or welfare. On December 7, 2009, the USEPA issued an Endangerment Finding under Section 202(a) of the CAA, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the USEPA has not promulgated major regulations on GHG emissions, but it has begun to develop them.

The USEPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before Congress adopts major climate change legislation. The USEPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress. To date, Congress, under the Consolidated Appropriations Act of 2008 (HR 2764), has established mandatory GHG reporting requirements for some emitters of GHGs. On September 22, 2009, the USEPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the USEPA of GHG emissions from large sources and suppliers of GHGs, including facilities that emit 25,000 MT or more a year of GHGs.

Regarding vehicle emission standards, in 2019, the National Highway Traffic Safety Administration (NHTSA) and USEPA amended certain existing Corporate Average Fuel Economy (CAFE) and

greenhouse gas emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026. The rule also revoked California's ability to set its own, higher fuel efficiency standards, which are granted by waiver. California has filed two lawsuits against the EPA over proposed the amendments and repeal of the waiver. In May 2021, NHTFSA proposed to repeal the amended standards, but the decision was not finalized. (NHFTSA 2021) In March 2022, EPAs most recent decision, they rescinded the action to revoke California's ability to set its own higher fuel efficiency standards. This restored California's authority to implement its own GHG emissions standards. (NHTSA 2022)

2.2.2.State

California has adopted various administrative initiatives and also enacted a variety of legislation relating to climate change, much of which sets aggressive goals for GHG emissions reductions within the state. However, none of this legislation provides definitive direction regarding the treatment of climate change in environmental review documents prepared under CEQA. In particular, the amendments to the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or thresholds of significance, and do not specify GHG reduction mitigation measures. Instead, the CEQA amendments continue to rely on lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. In addition, no state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating any significant effects in CEQA documents. Thus, lead agencies exercise their discretion determining how to analyze GHGs.

The discussion below provides a brief overview of CARB and California Governor's Office of Planning and Research (OPR) documents and of the primary legislation that relates to climate change that may affect the emissions associated with the proposed Project. It begins with an overview of the primary regulatory acts that have driven GHG regulation and analysis in California.

Assembly Bill 32, Senate Bill 32, and Assembly Bill 1279

The California Global Warming Solutions Act of 2006 (Assembly Bill 32) was signed into law in September 2006 after considerable study and expert testimony before the legislature. The law instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. Assembly Bill (AB) 32 directed CARB to set a GHG emission limit based on 1990 levels to be achieved by 2020. AB 32 set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner (AB-32). AB 32 was followed by Senate Bill (SB) 32 in 2016, which expanded this goal for statewide GHG emissions to be 40 percent below 1990 levels by 2030 (SB-32). Assembly Bill 1279, signed into law September 2022, requires the state to achieve net zero greenhouse gas emissions (GHG) as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter. The bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels, and directs CARB to work with relevant state agencies to achieve these goals.

In December 2008, CARB adopted a Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various categories of emissions. CARB determined that achieving the 1990 emission levels would require a reduction of GHG emissions of by approximately 28.5 percent to achieve 2020 emissions levels in the absence of new laws and regulations (i.e. business as usual). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as

regulations, and outlines the role of a Cap-and-Trade Program. The key elements of the Scoping Plan include: (CARB 2008, pp. ES-3 – ES-4)

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards,
- Achieving a statewide renewable energy mix of 33 percent,
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions,
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets,
- Adopting and implementing measures pursuant to existing State laws and policies including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS),
- Creating targeted fees including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

The CARB approved the final "First Update to the Climate Change Scoping Plan" in May 2014. The first update describes California's progress towards AB 32 goals stating that "California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014, p. ES2). Specifically, "if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80 percent below 1990 levels by 2050" (CARB 2014, p. 34). The first update laid the groundwork for the GHG emission goals set forth in Executive Order S-3-05 and B-16-2012 (CARB 2017a, p. 5), which set an objective for California to reduce GHG emissions to 80 percent below 1990 levels by 2050 (CARB 2014, p. 1).

CARB adopted a second update to the Scoping Plan to reflect the 2030 target codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's Executive Order B-30-15. Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 million metric tons of CO_2E (million $MTCO_2E$). The companion bill to SB 32, AB 197, provides additional direction to CARB on the following areas related to the adoption of strategies to reduce GHG emissions (CARB 2017a, pp. 2-3):

- Requires annual posting of GHG, criteria, and TAC data throughout the State, organized by local and sub-county level for stationary sources and by at least a county level for mobile sources.
- Requires CARB, when adopting rules and regulations to achieve emissions reductions and to protect the State's most affected and disadvantaged communities, to consider the social costs of GHG emissions and prioritize both of the following:
    - Emissions reductions rules and regulations that result in direct GHG emissions reductions at large stationary sources of GHG emissions and direct emissions reductions from mobile sources.
- Emissions reductions rules and regulations that result in direct GHG emissions reductions from sources other than those listed above.

- Directs CARB, in the development of each scoping plan, to identify for each emissions reduction measure:
    - The range of projected GHG emissions reductions that result from the measure.
    - The range of projected air pollution reductions that result from the measure.
    - The cost-effectiveness, including avoided social costs, of the measure.
- CARB's 2017 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The 2017 Scoping Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources (CARB 2017a, pp. 5-6).

The CARB approved the most recent scoping plan update in December 2022 (CARB 2022c). CARB's 2022 Scoping Plan lays out the sector-by-sector roadmap for California to achieve carbon neutrality by 2045 or earlier, outlining a technologically feasible, cost-effective, and equity-focused path to achieve the state's climate target. The previous Scoping Plans have focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—first to meet 1990 levels by 2020, then to meet the more aggressive target of 40 percent below 1990 levels by 2030. The 2022 Scoping Plan addresses recent legislation (AB 1279) and direction from the current Governor and extends and expands upon the earlier Scoping Plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. The 2022 Scoping Plan also builds upon current and previous environmental justice efforts to integrate environmental justice directly into the plan, to ensure that all communities can reap the benefits of this transformational plan. Specifically, the 2022 Scoping Plan will:

- Identify a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identify technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels.
- Focus on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrate equity and protecting California's most impacted communities as driving principles throughout the document.
- Incorporate the contribution of natural and working lands (NWL) to the state's GHG emissions, as well as their role in achieving carbon neutrality.
- Rely on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluate the substantial health and economic benefits of taking action.
- Identify key implementation actions to ensure success.

The 2022 Scoping Plan outlines how carbon neutrality can be achieved by taking measures to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the state's natural and working lands and using a variety of mechanical approaches. The actions and outcomes in the plan will achieve: significant reductions in fossil fuel combustion by deploying clean

technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

Senate Bill 375 and SCAG Regional Transportation Plan/Sustainable Community Plan
SB 375 provides for a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32 (SB-375). SB 375 includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. SB 375 also requires Metropolitan Planning Organizations (MPOs) relevant to the Project area (including the Southern California Association of Governments (SCAG)) to incorporate a "sustainable communities' strategy" (SCS) into their regional transportation plans (RTPs) that will achieve GHG emission reduction targets by reducing vehicle miles traveled (VMT) from light duty vehicles through development of more compact, complete, and efficient communities.

On September 23, 2010, CARB adopted Regional Targets for the reduction of GHG applying to the years 2020 and 2035 (CARB 2010). For the area under SCAG's jurisdiction (including the project area), CARB adopted Regional Targets for reduction of GHG emissions by eight percent for 2020 and by 13 percent for 2035.

SCAG's SCS is included in the SCAG 2016-2040 Regional Transportation Plan Sustainable Communities Strategy (RTP/SCS) (SCAG 2016). The document was adopted by SCAG on April 7, 2016. The goals and policies of the RTP/SCS that reduce VMT focus on transportation and land use planning that include building infill projects, locating residents closer to where they work and play and designing communities so there is access to high quality transit service (SCAG 2016, pp. 17, 64-65.) The 2016-2040 RTP/SCS would result in an eight percent reduction in GHG emissions per capita by 2020, an 18 percent reduction by 2035 and a 21 percent reduction by 2040—compared with 2005 levels (SCAG 2016, p. 153). This meets or exceeds the State's mandated reductions established by CARB and meets the requirements of SB 375 as codified in Government Code §65080(b) et seq., which are eight percent by 2020 and 13 percent by 2035. The 2016-2040 RTP/SCS is expected to reduce the number of VMT per capita by more than seven percent and Vehicle hours traveled (VHT) per capita by 17 percent (for automobiles and light/medium duty trucks) as a result of more location efficient land use patterns and improved transit service (SCAG 2016, p. 153).

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy). (SCAG 2020)

CARB updated the regional targets in 2018 to ensure consistency with the more stringent statewide reduction goals subsequently introduced by the California legislature and the Governor's office. For the SCAG region, the updated targets are 8 percent below 2005 per capita emissions levels by 2020 (this value is unchanged from the previous 2020 CARB target), and 19 percent below 2005 per capita emissions levels by 2035. (SCAG 2020, p. 138.)

Connect SoCal SCS has been found to meet State targets for reducing GHG emissions from cars and light trucks. Connect SoCal achieves per capita GHG emission reductions relative to 2005 levels of 8 percent in 2020, and 19 percent in 2035, thereby meeting the GHG reduction targets established by the CARB for the SCAG region. (SCAG 2020, p. 138.)

Senate Bill 605

On September 21, 2014, the then Governor Edmund Brown signed Senate Bill 605 (SB 605), which requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants (SLCP) in the State no later than January 1, 2016. As defined in the statute, SLCP means "an agent that has a relatively short lifetime in the atmosphere, from a few days to a few decades, and a warming influence on the climate that is more potent than that of carbon dioxide." SB 605, however, does not prescribe specific compounds as SLCP or add to the list of GHGs regulated under AB 32. In developing the strategy, CARB must complete an inventory of sources and emissions of SLCP in the State based on available data, identify research needs to address any data gaps, identify existing and potential new control measures to reduce emissions, and prioritize the development of new measures for SLCP that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities (SB-605). In March 2017, CARB approved the Short-Lived Climate Pollutants Reduction Strategy that lays out a range of options to reduce SLCP emissions in California, including regulations, incentives, and other market-supporting activities. The climate change mitigation in the SLCP Strategy are included in the 2017 Scoping Plan (CARB 2017b).

Senate Bill 97 (CEQA Guidelines)

SB 97 required OPR to prepare amended State CEQA Guidelines for submission to the California Natural Resources Agency (CNRA) regarding GHG analysis and feasible mitigation of the effects of GHG emissions as required by CEQA. These amendments became effective as of March 18, 2010 (CNRA SB 97). The State CEQA Guidelines were also more recently amended as of December 2018; this amendment include several changes in State CEQA Guidelines Section 15064.4, which discusses determining the significance of impacts from GHG emissions, in order to reflect current case law on climate change analysis and help the public and policymakers understand a project's potential contribution to climate change (CNRA 2018, pp. 17-20).

The current State CEQA Guidelines adopted pursuant to the 2010 and 2018 amendments state in Section 15064.4(a) that lead agencies should "make a good faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. State *CEQA Guidelines* Section 15064.4(a) notes that an agency may identify emissions by either quantifying the emissions or by relying on "qualitative analysis or other performance based standards".

State *CEQA Guidelines* Section 15064.4(b) provides that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent a project may increase or reduce GHG emissions as compared to the environmental setting
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions

In addition, Section 15064.7(c) of the State *CEQA Guidelines* specifies that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." Similarly, the 2010 revision to Appendix G, Environmental Checklist Form which is often used as a basis for lead agencies' selection of significance thresholds, does not prescribe specific thresholds (there were no revisions to the GHG emissions thresholds in the 2022 State *CEQA Guideline* amendments). Rather, Appendix G asks whether

the project would conflict with a plan, policy, or regulation adopted to reduce GHG emissions or generate GHG emissions that would significantly affect the environment, indicating that the determination of what is a significant effect on the environment should be left to the lead agency.

Accordingly, the *CEQA Guidelines* do not prescribe specific methodologies for performing an assessment of GHG impacts, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Amendments emphasize the lead agency's discretion to determine the appropriate thresholds of significance consistent with the manner in which other impact areas are handled in CEQA.

The *CEQA Guidelines* indicate that lead agencies should consider all feasible means, supported by substantial evidence and subject to monitoring and reporting, of mitigating the significant effects of GHG emissions. As pertinent to a project, these potential mitigation measures set forth in Section 15126.4(c), may include (1) measures in an existing plan or mitigation program for the reduction of GHG emissions that are required as part of the lead agency's decision; (2) reductions in GHG emissions resulting from a project through implementation of project features or project design; (3) off-site measures, including offsets, to mitigate a project's emissions; (4) measures that sequester GHG; and (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of GHG emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

2.2.3.Regional Regulations

South Coast Air Quality Management District

SCAQMD is principally responsible for comprehensive air pollution control for Los Angeles, Orange, and the urbanized portions of Riverside and San Bernardino Counties, including the Project site. SCAQMD works directly with SCAG, County transportation commissions and local governments, and cooperates actively with all federal and State government agencies to regulate air quality.

In April 2008, SCAQMD convened a Working Group to develop GHG significance thresholds. On December 5, 2008, SCAQMD Governing Board adopted its staff proposal for an interim CEQA GHG significance threshold for projects where SCAQMD is the lead agency. As to all other projects where SCAQMD is not the lead agency, the Board has, to date, only adopted an interim threshold of 10,000 $MTCO_2E$ per year for industrial stationary source projects (SCAQMD 2008a).

For all other projects, SCAQMD staff proposed a multiple tier analysis to determine the appropriate threshold to be used. The draft proposal suggests the following tiers: Tier 1 is any applicable CEQA exemptions; Tier 2 is consistency with a GHG reduction plan; Tier 3 is a screening value or bright line; Tier 4 is a performance based standard; and Tier 5 is GHG mitigation offsets (SCAQMD 2008a). According to the presentation given at the September 28, 2010 Working Group meeting, SCAQMD staff proposed a Tier 3 draft threshold of 1,400 to 3,500 $MTCO_2E$/year depending on if the project was commercial, mixed use, or residential. For the Tier 4 draft threshold, SCAQMD staff presented a percent emission reduction target option but did not provide any specific recommendation for a percent emission reduction target; instead, it referenced the San Joaquin Valley Air Pollution Control District approach. The percent reduction target is based on consistency with AB 32 as it was based on the same numeric reductions calculated in the Scoping Plan to reach 1990 levels by 2020. The second Tier 4 option is to utilize an efficiency target for 2020 and 2035 of 4.8 and 3.0 metric tons per service population per year for project level thresholds and 6.6 and 4.1 metric tons per service population for plan level thresholds (SCAQMD 2010).

The Working Group has not convened since the fall of 2010. The proposal has not been considered or approved for use by SCAQMD's Board. In the meantime, no GHG significance thresholds are approved for use in the Basin. However, that does not preclude lead agencies from utilizing the draft thresholds to evaluate the potential impacts associated with general development projects. The City of Jurupa Valley General Plan Policy AQ 9.5 requires the City to utilize the SCAQMD Draft GHG thresholds to evaluate development proposals until the City adopts a Climate Action Plan (CAP). As of July 2023, the City has not adopted a CAP.

Western Riverside Council of Governments

The City is a member of the Western Riverside Council of Governments (WRCOG), the municipal planning organization for Riverside County. WRCOG has been a leader in promoting sustainability through its adopted Sustainability Framework, Western Riverside Energy Leader Partnership, Home Energy Renovation Opportunity (HERO) Program—an energy efficiency and water conservation financing program, and Western Riverside County Clean Cities Coalition.

Twelve cities in Western Riverside County, including the City, joined efforts to develop a Subregional Climate Action Plan (Subregional CAP), which sets forth a subregional emissions reduction target, emissions reduction measures, and action steps to assist each community to demonstrate consistency with AB 32. An existing GHG emissions inventory was developed and future emissions and reduction goals were set. Existing GHG reduction programs and policies that had already been implemented in the subregion and best practices from other regions influenced the reduction measures and actions identified in the Subregional CAP to assist meeting the 2020 subregional reduction target of 15 percent below 2010 levels. The Subregional CAP does not establish a reduction target for 2035 or future years; however, the Subregional CAP identifies a reduction goal of 49 percent below baseline emissions levels to set the WRCOG subregion on a trajectory to meet targets identified in SB 375 and Executive Order S-03-05, recognizing that information, methodologies, and data availability may change between now and 2035 (WRCOG CAP-A). WRCOG is currently preparing an update and expansion to the Subregional CAP, which will include a comprehensive update to GHG inventories and GHG emissions reduction strategies for all sectors and will establish GHG targets for the years 2030 and 2050 for all WRCOG member jurisdictions. It was anticipated that the Subregional CAP update would be complete by June 2021; however, to date, an update has not been released (WRCOG CAP-B).

2.2.4.Local

City of Jurupa Valley General Plan

The City's GP contains the following goals and policies that are considered applicable to the proposed Project:

Air Quality

Goals

Goal AQ 2	Helps protect its residents, and especially senior citizens, youth and other sensitive receptors, from toxic air pollution.
Goal AQ 3	Works to reduce emissions from stationary and mobile sources.
Goal AQ 4	Employs measures to improve the jobs/housing balance and reduce commuting time.

Polices

AQ 1.2 **Air Quality Measures.** Establish and implement air quality, land use, and mobility measures that improve not only the City's environment but also that of the entire region.

AQ 2.1 **Site Plan Designs.** Require City land use planning efforts and site plan designs to protect people and land uses sensitive to air pollution, using barriers and/or distance from emissions sources, and protect sensitive receptors from polluting sources, wherever possible.

AQ 2.2 **Pollution Control Measures.** Strongly encourage the use of pollution control measures such as landscaping, vegetation and other materials that trap particulate matter or control pollution.

AQ 3.1 **Efficient Building Materials/Equipment**. Encourage the use of building materials/methods and heating equipment that are efficient and reduce emissions.

AQ 3.2 **Centrally Heated Facilities**. Encourage centrally heated facilities to utilize automated time clocks or occupant sensors to control heating.

AQ 3.3 **Stationary Pollution Reduction**. Require stationary pollution sources to prevent the release of toxic pollutants through the following:

1.Design features;
2.Operating procedures;
3.Preventive maintenance;
4.Operator training; and
5.Emergency response planning

AQ 3.4 **Emissions Mitigation.** Require every project to mitigate any of its anticipated emissions that exceed allowable levels as established by the SCAQMD, the US EPA, and CARB, to the greatest extent possible.

AQ 5.1 **Reduce Solid Waste.** Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

AQ 5.2 **Energy Conservation.** Encourage advanced energy conservation techniques and the incorporation of energy-efficient design elements for private and public developments, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling, and offer incentives, as appropriate.

AQ 9.1 **State and Regional Plans and Programs**. Monitor federal, state, and regional plans and programs to stay abreast on emerging information, practices, and strategies to address climate change.

AQ 9.2 **Critical Infrastructure**. Locate critical infrastructure in areas not subject to severe climate change impacts, such as flooding.

AQ 9.3 **Climate Action Plan**. Work with WRCOG to periodically monitor and update the Subregional Climate Action Plan.

AQ 9.4 **Vulnerability**. Develop strategies to reduce the City's vulnerability to climate change impacts.

AQ 9.5 **GHG Thresholds**. Utilize the SCAQMD Draft GHG thresholds to evaluate development proposals until the City adopts a Climate Action Plan (CAP).

2.3. Emissions Estimates

2.3.1. Short Term Analysis

Construction Related Emissions

The CalEEMod model calculates GHG emissions from fuel usage by construction equipment and construction-related activities, like construction worker trips, for the Project. The estimated construction period for the proposed Project is anticipated to begin no earlier than June 2024 (see Section 1.4.1 for detailed construction assumptions). The CalEEMod estimate does not analyze emissions from construction-related electricity or natural gas. Construction-related electricity and natural gas emissions vary based on the amount of electric power used during construction and other unknown factors which make them too speculative to quantify. The CalEEMod output results for construction-related GHG emissions present the GHG emissions estimates for the Project for CO_2, methane (CH_4), nitrous oxide (N_2O), and CO_2E.

Table 13 – Project Construction Equipment GHG Emissions

Year	Metric Tons per year (MT/yr)			
	Total CO_2	Total CH_4	Total N_2O	Total CO_2E
2024	1,576.00	0.06	0.02	1,584.00
2025	2,540.00	0.10	0.13	2,583.00
2026	2,552.00	0.06	0.13	2,595.00
2027	2,517.00	0.06	0.12	2,559.00
2028	1,257.00	0.04	0.04	1,271.00
2029	829.00	0.02	0.03	838.00
2030	483.00	0.02	0.01	486.00
2031	254.00	0.01	0.01	255.00
Total	12,008.00	0.37	0.49	12,171.00
Amortized				**405.70**

Evaluation of the table above indicates that an estimated 12,171.00 $MTCO_2E$ will occur from Project construction equipment over the course of the estimated construction period. The draft SCAQMD GHG threshold Guidance document released in October 2008[9] recommends that construction emissions be amortized for a project lifetime of 30 years to ensure that GHG reduction measures address construction

[9] http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2

GHG emissions as part of the operational reduction strategies. Therefore, the total GHG emissions from Project construction were amortized and are included in **Table 15**, below.

2.3.2.Long Term Analysis

Area Source Emissions

CalEEMod estimates the GHG emissions associated with area sources which include landscape equipment emissions, architectural coating, consumer products, and hearths. Landscape equipment servicing the Project site create CO_2 resulting from fuel combustion based on the Project's land uses. Consumer products consist of consumer use of solvents and personal care products and architectural coatings consist of an average building square footage to be repainted each year. Hearth emissions apply to proposed dwelling units and as stated above are included in all residential units except for apartments from the Project and assumed to be natural gas burning per SCAQMD Rule 445. **Table 15**, below, summarizes the GHG emissions from the Project's area source emissions.

Energy-Related Emissions

CalEEMod estimates the GHG emissions associated with building electricity and natural gas usage (non-hearth) for each land use type. Electricity and natural gas used in buildings is typically generated at an off-site power plant which indirectly generates GHG emissions. The default energy usage values used in CalEEMod are based on the 2019 consumption estimates from the California Energy Commission (CEC) and reflect 2019 Title 24 improvements (CalEEMod User's Guide). The following table summarizes the GHG emissions estimates reported by CalEEMod for all three Phases of the Project.

Table 14 – Energy Related GHG Emissions

Source	Metric Tons per year (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2E
Electricity	2,268.80	0.22	0.03	2,282.30
Natural Gas	3,821.00	0.34	0.00	3,832.00
Total	**6,089.80**	**0.56**	**0.03**	**6,114.30**

Note: Emissions reported are the sum of each Phase.

Mobile Source Emissions

CalEEMod estimates the annual GHG emissions from Project-related vehicle usage based on trip generation data contained in defaults or in a project-specific traffic analysis. As stated above, the Project-specific TIA was utilized for weekday trip rates and the most recent ITE Trip Generation Manual, 11th Edition, was used for weekend trip rates. **Table 15** shows the mobile source emissions from the Project.

Water Related Energy Usage

Electricity is also indirectly used in water supply, treatment, and distribution, as well as wastewater treatment in Southern California and plays a large role in GHG production.

There are three processes necessary to supply potable water to urban users (i.e., residential, commercial, and industrial): (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, the wastewater is treated and either reused as reclaimed/recycled water or returned to the environment. CalEEMod calculates the GHG emissions from these processes based on default emissions factors and water/wastewater generation rates for a project's location. Water demand was obtained from the Project-specific Water Supply Assessment, which includes estimates for potable water and non-potable

(recycled) water.[10] **Table 15** shows the resulting GHG emissions from water-related energy usage for the Project.

Solid Waste Emissions

CalEEMod also calculates the GHG emissions associated with the disposal of solid waste into landfills based on default data contained within the model for waste disposal rates, composition, and the characteristics of landfills throughout the state. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. **Table 15** shows the solid waste emissions from the Project.

Refrigerants

Air conditioning (A/C) and refrigeration equipment associated with the buildings are anticipated to generate GHG emissions. CalEEMod automatically generates a default A/C and refrigeration equipment inventory for each project land use subtype based on industry data from the USEPA. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate. Note that CalEEMod does not quantify emissions from the disposal of refrigeration and A/C equipment at the end of its lifetime. **Table 15** shows the refrigerant emissions from the Project.

2.3.3.Total Project Emissions

As shown on **Table 15 – Total Project-Related GHG Emissions**, using all the emissions quantified above, the total GHG emissions generated from all three Phases of the Project is approximately 40,071.64 $MTCO_2E$/yr which includes construction-related emissions amortized over a typical project life of 30 years.

Table 15 – Total Project-Related GHG Emissions

Source	Metric Tons per year (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2E
Amortized Construction	--	--	--	405.70
Area	260.79	0.00	0.00	260.89
Energy	6,090.00	0.56	0.03	6,114.00
Mobile[1]	32,059.00	1.08	1.41	32,551.00
Water	191.35	3.82	0.09	314.60
Solid Waste	120.90	12.10	0.00	423.20
Refrigerants	0.00	0.00	0.00	2.25
Total	**38,722.04**	**17.56**	**1.53**	**40,071.64**

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

[1] Total CO_2E emissions include refrigerants.

As stated in Section 2.2.4, per General Plan Policy AQ 9.5, the City utilizes the SCAQMD Draft GHG thresholds to evaluate development proposals until the City adopts a CAP. The appropriate Draft GHG

[10] Albert A Webb Associates, *Water Supply Assessment and Written Verification of Sufficient Water Supply*, December 12, 2022.

threshold for this Project is 3,000 $MTCO_2E$/yr. The total GHG emissions from the Project exceed the City's threshold of 3,000 $MTCO_2E$/yr. Please see Section 2.3.4, Recommended Mitigation Measures for mitigation that reduces the Project's GHG emissions.

2.3.4. Recommended Mitigation Measures

In order to reduce GHG emissions from Project operation, the following mitigation measures from Section 1.5 are recommended:

MM AQ 2: The City Public Works and Engineering Department shall verify before issuance of all residential building permits that where appliances are installed by residential project developers, Energy Star-rated appliances (or other equivalent technology) for clothes washers, dish washers, refrigerators, and ceiling fans shall be installed in the residences.

MM AQ 3: The City Building and Safety Department shall verify before issuance of all residential and non-residential building permits that all in-unit fixtures installed in residential and nonresidential buildings will be high efficacy. High efficacy lighting includes compact fluorescent lamps (CFLs), light emitting diodes (LED), and other light bulbs that provide an energy efficiency of at least 40 lumens/watt for 15 watt or less fixtures, 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40 watts.

MM AQ 4: Upon a residential dwelling unit being sold, offered for sale or rented, the Project Applicant or its designee shall notify and offer to the prospective buyer or tenant, as soon as it may be done, disclosure materials describing available public transit, ridesharing and non-motorized commuting opportunities available in the vicinity of the Project. Such information shall be transmitted no later than the close of escrow or finalization of a rental contract. A draft of this disclosure shall be submitted to the City of Jurupa Valley Planning Department for review prior to the issuance of the first certificate of occupancy.

MM AQ 5: The Project developers shall install broadband infrastructure or other communication technologies that encourage telecommuting and working from home, which reduces mobile source emissions. The applicant shall submit documentation to the City Building and Safety Department prior to occupancy.

MM AQ 6: The Project developers shall offer electrical outlets on patios, which reduces area source emissions. The City Planning Department shall verify architectural plans for implementing tract maps include such requirements before implementing project approval.

2.4. Findings and Conclusions

2.4.1. Evaluation of Thresholds

The following thresholds and discussion were included in this study to assist in the Project's evaluation of impacts under CEQA:

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

For CEQA purposes, a final numerical threshold for determining the significance of GHG emissions from non-industrial projects has not been established by SCAQMD for projects where they are not the lead agency. City of Jurupa Valley General Plan Policy AQ 9.5 requires the City to utilize the

SCAQMD Draft GHG thresholds to evaluate development proposals until the City adopts a Climate Action Plan (CAP). The City has determined that the SCAQMD's draft threshold of 3,000 $MTCO_2E$ per year is appropriate for land use development projects.

Evaluation of the data presented in **Table 15 – Total Project-Related GHG Emissions**, above, indicates that the total GHG emissions generated from the Project is approximately 40,071.64 $MTCO_2E$/yr which includes construction-related emissions amortized over a typical project life of 30 years.

Implementation of **MM AQ 2** through **MM AQ 6** aim to reduce GHG emissions; however, **MM AQ 2** through **MM AQ 6** do not have quantitative reductions associated with them available in CalEEMod and given that the majority of Project-generated emissions are from mobile sources from resident's vehicle usage, the emissions are outside the jurisdiction and control of the Project and City. Although mitigation measures **MM AQ 2** through **MM AQ 6** will serve to potentially reduce transportation- and energy-related emissions, the reductions will not reduce emissions below applicable thresholds for GHG. Beyond those already presented, there are no feasible measures to substantially reduce emissions or reduce emission below applicable thresholds.

As such, the Project will potentially result in GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The City does not have an adopted CAP; therefore, the Project's consistency with the 2022 Scoping Plan was evaluated. Evaluation of consistency with the 2022 Scoping Plan is reasonable and appropriate because it is a statewide plan adopted for reducing GHG emissions. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. For example, current transportation sector measures are implemented by the manufacturers, which includes the Advanced Clean Cars II and the Low Carbon Fuel Standard. The Project is also subject to building code requirements under the building energy efficiency standards (Title 24) and green building standards (CALGreen). New buildings are required to comply with the applicable building code requirements and standards in place at the time building permit documentation submittals are made. For instance, the new 2022 Title 24 building codes requires electric-ready residential buildings when natural gas equipment is installed to facilitate future installation of electric appliances. Additionally, the Project would provide sidewalks, bike racks, and pedestrian walkways which promotes alternative modes of transportation (walking, biking, and transit) and reduces VMT.

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects, in fact CARB states in Appendix D (page 4): "…focuses primarily on climate action plans (CAPs) and local authority over new residential development. It does not address other land use types (e.g., industrial) or air permitting."

The 2022 Scoping Plan lays out a framework to determine Project-level consistency when there is not a CEQA-qualified CAP available to tier off of. CARB recommends that the first approach for determining whether a proposed residential or mixed-use residential development would align with the State's climate goals is to examine whether the project includes key project attributes that reduce operational GHG emissions while simultaneously advancing fair housing. The 2022 Scoping Plan goes on to note that Projects that can demonstrate consistency with the priority areas identified on Table 3 Key Residential and Mixed-Use Project Attributes that Reduce GHGs from the 2022 Scoping Plan would be aligned with the State's priority GHG reduction strategies and would be deemed consistent with the Scoping Plan. As such, these Projects are considered to be clearly consistent with the Scoping Plan or other plans, policies, or regulations adopted for the purposes of reducing GHGs; therefore, the GHG emissions associated with such projects would result in a less-than-significant GHG impact under CEQA.

The Project's consistency with the Key Residential and Mixed-Use Project Attributes that Reduce GHGs is summarized on **Table 16**.

Table 16 – Consistency with 2022 Scoping Plan Key Residential and Mixed-Use Project Attributes that Reduce GHGs

Priority Areas	Key Project Attribute	Consistency Analysis
Transportation Electrification	Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval	**Consistent.** The VRSP shall require all single-family and multi-family units provide EV charging infrastructure that meets, at minimum, the Tier 2 voluntary residential measures contained in the 2022 Green Building Standards Code (CALGreen).
VMT Reduction	Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)	**Consistent.** The Project site is located in an area surrounded by urban uses, with a former horse farm to the north, existing residential and recreational development to the east, existing commercial development to the south, and the I-15 to the west. Existing utilities and essential public services are located in streets adjacent to the Project site.
	Does not result in the loss or conversion of natural and working lands	**Consistent.** The Project site is currently being utilized for agricultural uses (row crops); however, it is within the I-15 Corridor Specific Plan (Specific Plan No. 266), adopted in 1993. The Project site is currently zoned for medium density residential and industrial park uses. This Project

Priority Areas	Key Project Attribute	Consistency Analysis
		applicant proposes a Specific Plan Amendment to remove Planning Areas 10, 13, 15, & 20 consisting of approximately 153 Acres from the I-15 Corridor Specific Plan and proposes a new Specific Plan (VRSP) for this area. In addition, the City's 2017 General Plan does not include an agricultural land use designation. Moreover, the scope of "working lands" included in the State's Natural and Working Lands Inventory (CARB 2018) include croplands that are comprised of woody biomass from orchards and vineyards, unlike existing conditions on the Project site. For the reasons explained above, the Project would not result in the loss or conversion of natural and working lands.
	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), or Is in proximity to existing transit stops (within a half mile), or Satisfies more detailed and stringent criteria specified in the region's SCS	**Consistent.** There are existing transit stops within a half mile of the Project site. The closest bus stop is located near the intersection of Limonite Avenue and Pats Ranch Road, approximately 0.36 mile from the Project site. There are also future bus stops located on Wineville Avenue, less than one-quarter mile east of the Project site, that will be accessible from the main access points of the VRSP.
	Reduces parking requirements by: Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or Providing residential parking supply at a ratio of less than one parking space per dwelling unit; or For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	**Inconsistent.** This attribute does not apply to the single-family units. For multi-family units, the Project will be inconsistent with this attribute because unbundled parking is atypical in this area. Typically, one parking space is provided for each rental unit within the base rental cost. However, additional parking spaces and/or garage space may be subject to an upcharge. Unbundling parking costs in the Project area would impair its marketability.

Priority Areas	Key Project Attribute	Consistency Analysis
	At least 20 percent of units included are affordable to lower-income residents	**Partially Consistent.** The VRSP does not include 20 percent affordable housing. However, the VRSP will comply with the City of Jurupa Valley Municipal Code (JVMC) Chapter 9.267, as amended by Ordinance No. 2022-14, which requires all residential or mixed-use development projects to rent or sell seven percent (7%) of the units at an affordable housing cost. The Project applicant will pay an in-lieu fee to satisfy this requirement, consistent with Section 9.267.060 of the JVMC.
	Results in no net loss of existing affordable units	**Consistent.** There are no existing affordable housing units on the Project site.
Building Decarbonization	Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking	**Partially Consistent.** The VRSP shall require all single-family units utilize all-electric appliances without any natural gas connections, propane, or other fossil fuels. The VRSP shall require all multi-family units utilize all-electric appliances within the dwelling units. However, some natural gas connections may be included in the common areas

Source: CARB 2022c

As shown in **Table 16**, above, the Project does not include all of the key project attributes that reduce operational GHG emissions and therefore has potential to impede the State's ability to achieve the 40% below 1990 level reduction target. On that basis, the Project is considered inconsistent with the 2022 Scoping Plan, and no feasible mitigation measures exist to reduce the Project's GHG emissions.

3. Energy

3.1. Background

Energy sources are classified as non-renewable if they cannot be replenished in a short period of time. Therefore, non-renewable energy resources include fossil fuels, which consist of oil, coal, and natural gas and associated byproducts. Fossil fuels provide the energy required for the vast majority of motorized vehicles and generation of electricity at power plants. Thus, the discussion of energy conservation most relevant to the Project is focused on Project-generated electricity demand, natural gas demand, and fuel consumption.

3.2. Setting

3.2.1. Electricity

Southern California Edison (SCE) provides service to the City of Jurupa Valley (City). SCE is one of the nation's largest electric utilities and provides electricity service to more than 15 million people in a 50,000-square-mile area of central, coastal, and Southern California. SCE monitors and maintains a vast electricity system consisting of approximately 12,635 miles of transmission lines and 91,375 miles of distribution lines (SCE-A]).

SCE is dedicated to conserving energy generated by fossil fuels and increasing its portfolio of renewable energy sources. In 2019, 38 percent of SCE's energy supply was generated from renewable energy sources (CPUC-A, p. 9), which includes bioenergy, geothermal, small hydropower, conduit hydropower, wind, and solar power (CPUC-A, p. 18). SCE has exceeded the 2020 Renewables Portfolio Standard (RPS) requirement of 33 percent. (CPUC-A, p. 6.) Therefore, SCE is in full compliance with the California renewable energy goals and legislative mandates and is on track to meet the 2030 RPS procurement mandate of 60 percent per Senate Bill (SB) 100 which will require all of California's electricity to come from carbon-free sources by 2045 (CPUC-A, p. 43). SCE's electricity consumption by sector as of 2021 is provided in **Table 17**, below.

Table 17 – SCE Electricity Consumption in 2021 (GWh)

Agricultural & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Streetlight	Total Usage[a, b]
3,254.43	28,153.74	5,164.9	12,717.05	1,554.27	29,735.4	549.11	81,128.92

Notes:
[a] Source: CEC-2021a
[b] all units are in millions of kilowatt-hours (GWh)

As reported by the California Energy Commission (CEC) in **Table 17** above, SCE consumed approximately 81 billion kilowatt-hours (kWh) in 2021, of which approximately 30 billion kWh were consumed by the residential sector and 28 billion kWh were consumed by the commercial building sector.

3.2.2. Natural Gas

The City's natural gas purveyor is Southern California Gas Company (SCG), a subsidiary of Sempra Energy, a private company. As a public utility, SCG is under the jurisdiction of California Public Utilities Commission (CPUC) but can also be affected by actions of federal regulatory agencies (CPUC-B). SCG

is the principal distributor of natural gas in Southern California, providing retail and wholesale customers with transportation, exchange, storage services and also procurement services to most retail core customers. SCG is a gas-only utility and, in addition to serving the residential, commercial, and industrial markets, provides gas for enhanced oil recovery (EOR) and electric generation (EG) customers in Southern California (CGEU, p. 93).

California's existing gas supply portfolio is regionally diverse and includes supplies from several sedimentary basins in the Western U.S. and Canada including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), Rocky Mountains, Western Canada, and local California supplies (CGEU, p. 111). The CPUC regulates natural gas utility service for approximately 11 million customers that receive natural gas from Pacific Gas and Electric (PG&E), SCG, San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities (CPUC-B).

Natural gas demand statewide, including volumes not served by utility systems, is expected to decrease at an annual rate of 1.0 percent through 2035. (CGEU, p. 96.) The decline in throughput demand is due to modest economic growth, and CPUC-mandated energy efficiency standards and programs and SB 350 goals. Other factors that contribute to the downward trend are tighter standards created by revised Title 24 Codes and Standards, renewable electricity goals, a decline in core commercial and industrial demand, and conservation savings linked to Advanced Metering Infrastructure (AMI). (CGEU, p. 96.)

From 2020-2035, residential demand is expected to decline approximately one percent per year, on average. Specifically, the decline is due to declining use per meter—primarily driven by very aggressive energy efficiency goals and associated programs—offsetting new meter growth. The core, non-residential markets [comprising core commercial, core industrial and Natural Gas Vehicles (NGV)] are expected to decline at an average annual rate of 1.0 percent by 2035. However, the NGV market is expected to grow 1.45 percent over the forecast horizon. The NGV market is expected to grow due to government (federal, state and local) incentives and regulations encouraging the purchase and operation of alternate fuel vehicles as well as the increased use of renewable natural gas that provides significant GHG emission reduction benefits. The noncore, non-EG markets are expected to decline 0.3 percent by 2035. That decline is being driven by very aggressive energy efficiency goals and associated programs. Total EG load, including large cogeneration and non-cogeneration EG for a normal hydro year, is expected to decrease of 2.0 percent per year by 2035 (CGEU, p. 96).

SCG also implements energy efficiency programs. SCG's conservation and energy efficiency activities are intended to help customers evaluate energy efficient options, and encourage customers to install energy efficient equipment, such as offering rebates for new hot water heaters (CGEU, p. 109). SCG's annual energy efficiency cumulative savings goals are expressed for different sectors in billion cubic feet (Bcf) as seen on page 110 of the 2020 California Gas Report (CGEU, p.110). SCG's forecasted saving for energy efficiency for the 2021-2030 period are based on the 2020 Energy Efficiency forecast scaled to the goals approved in the recent energy efficiency proceeding goals decision, D 19-08-03, which set energy efficiency goals through 2030. (CGEU, p.109). SCG is subject to energy efficiency targets established by SB 32 and SB 350. SB 32, which went into effect on January 1, 2017, sets a 2030 GHG emission target of 40 percent below 1990 levels. SB 350, which was signed into law on October 7, 2015, extends this target to 50 percent by 2030. Additionally, the law requires the state to double statewide energy efficiency savings in both the electric and natural gas sectors by 2030. (CGEU, pp. 125-129).

Natural gas service must be provided in accordance with SCG's policies and extension rules on file with CPUC at the time contractual agreements are made. The viability of natural gas is based on present

conditions of gas supply and regulatory policies. The natural gas consumption by sector within SCG's service area is provided in **Table 18**, below**.**

Table 18 – Natural Gas Consumption in SCG Service Area in 2021

Agricultural & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Total Usage [a, b]
84	844	94	1,650	169	2,261	5,101

Notes:
[a] Source: CEC-2021b
[b] all numbers in millions of therms and rounded to the nearest whole number

As shown in the table above, SCG consumed approximately 5.1 billion therms in 2021, of which approximately 2.2 billion therms were consumed by the residential sector and 844 million therms were consumed by the commercial building sector.

3.2.3.Transportation Fuel

Fossil fuels are known to create the United States' transportation fuels. Fossil fuel energy sources include oil, coal, and natural gas, which are non-renewable resources that formed when prehistoric plants and animals died and were gradually buried by layers of rock; however, fossil fuel industries drill or mine for these energy sources, burn them to produce electricity, or refine them for use as fuel for heating or transportation (USDOE).

The U.S. and specifically California is defined by the automobile. In 2021-2022 there were over 15 million vehicles registered in California by the Department of Motor Vehicles (CDMV). In 2019, 39.3 percent of all of California's energy use was used for transportation, approximately 3,060 trillion British thermal units (Btu) (USEIA-A). In 2019, California consumed 565,056 thousand barrels[11] of petroleum for transportation uses, which is approximately 3,0172 trillion Btu (USEIA-B).

The *2021 Integrated Energy Policy Report* (IEPR), which provides the results of the California Energy Commissions assessments of a variety of energy related issues facing California. The IERP includes a transportation energy and demand forecast that considers vehicles and associated fuels, incorporates consumer preference, regulatory impacts, economic and demographic projects, projected improvements in technology, and other market factors. (TEFA, pp. 3-4.) The most recent forecast estimated that between 2021 and 2035, gasoline fuel demand for transportation in California will decline primarily due to increases in electrification and the use of zero emission vehicles (ZEV)(TEFA, pp. 50-70).Petroleum-based fuels will continue to represent the largest shares of transportation energy demand. Under the high-demand case for Light Duty Vehicle, gasoline consumption will drop from approximately 13.8 billion gross gasoline equivalents (GGE) in 2020 to approximately 11 billion GGE in 2035. Electricity consumption would increase from less than 1 billion GGE in 2020 to approximately 4 billion GGE which includes raw energy used by the plug in-vehicles (PEV), but also the gasoline energy avoided by using

[11] One barrel (in reference to petroleum) is a unit of volume equal to 42 U.S. gallons (USEIA Glossary)

more PEVs. Diesel energy forecast is less than 1 GGE in 2020 and will remain roughly the same in 2035. (TEFA, p. 67).

3.3. Related Regulations

3.3.1. Federal Regulations

At the federal level, the United States Department of Transportation (DOT), the United States Department of Energy (DOE), and the United States Environmental Protection Agency (EPA) are three agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. Major federal energy-related laws and plans are discussed below.

Energy Independence and Security Act
On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law (EISA). Among other key measures, the Act would do the following, which would aid in the reduction of national mobile and non-mobile GHG emissions:

1 Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

2 Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

3 While superseded by NHTSA and USEPA actions described above, EISA also set miles per gallon targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs." (WH)

Federal Energy Policy and Conservation Act (EPCA)
The Federal Energy Policy and Conservation Act (EPCA) of 2018 grants specific authority to the President of the U.S. to fulfill obligations of the U.S. under the international energy program; provide for the creation of a Strategic Petroleum Reserve capable of reducing the impact of severe energy supply interruptions; conserve energy supplies through energy conservation programs; provide for improved energy efficiency of motor vehicles, major appliances and other consumer products; provide a means for verification of energy data to assure the reliability of energy data; and to conserve water by improving the water efficiency of certain plumbing products and appliances. Furthermore, the EPCA establishes fuel economy standards for on-road motor vehicles in the U.S (EPCA 2018).

The National Highway Traffic and Safety Administration (NHTSA) is responsible for establishing additional vehicle standards and revising existing standards under the EPCA (EPA 2012). Compliance with federal fuel economy standards is not determined for each individual vehicle model; instead, compliance is

determined on the basis of each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. The Corporate Average Fuel Economy (CAFE) program, administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. In the course of over a 30-year history, this regulatory program has resulted in vastly improved fuel economy throughout the United States' vehicle fleet, and also has protected against inefficient, wasteful, and unnecessary use of energy (NHTSA 2018).

In 2012, NHTSA established passenger and light truck CAFE standards for model years (MY) 2017 through 2021 which required, on an average industry fleet-wide basis, a range from 40.3 to 41.0 miles per gallon in MY 2021 (DOT 2014). In 2019, the NHTSA and EPA amended certain existing CAFE and greenhouse gas emissions standards for passenger cars and light trucks and establish new standards, covering model years 2021 through 2026 (NHTSA 2018). However, in March 2022, the NHTSA and EPA revised the standards covering MY 2024 through 2026 and would require an industry fleet-wide average of roughly 49 mpg in MY 2026. (NHTSA 2022.)

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was created to develop a National Intermodal Transportation System that is economically efficient, environmentally sound, and energy efficient. Major features of the ISTEA include (DOT 2017):

- A National Highway System (NHS), consisting primarily of existing Interstate routes and a portion of the Primary System, was established.
- State and local governments were given more flexibility in determining transportation solutions, whether transit or highways, and the tools of enhanced planning and management systems to guide them in making the best choices.
- New technologies, such as intelligent vehicle highway systems (now known as Intelligent Transportation Systems or ITS) and prototype magnetic levitation systems, were funded.
- The private sector was tapped as a source for funding transportation improvements.
- The Act continued discretionary and formula funds for mass transit.
- Highway funds were available for activities that enhance the environment, such as wetland banking, mitigation of damage to wildlife habitat, historic site, activities that contribute to meeting air quality standards, a wide range of bicycle and pedestrian projects, and highway beautification.
- Highway safety was further enhanced by a new program to encourage the use of safety belts and motorcycle helmets.
- State uniformity in vehicle registration and fuel tax reporting was required.

The Transportation Equity Act for the 21st Century (TEA-21)
The Transportation Equity Act for the 21st Century (TEA-21) builds upon the initiatives established in the ISTEA legislation discussed previously (DOT 2017). TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs (FHWA 2015). TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the

foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety (FHWA 1998).

3.3.2.State Regulations

At the State level, the CEC and CPUC are two agencies with authority over different aspects of energy. CPUC regulates privately-owned utilities in the energy, rail, telecommunications, and water sectors. CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from setting State fuel economy standards for new on-road motor vehicles. Major State energy-related laws and plans are discussed below.

California Air Resources Board (CARB)

The California Air Resources Board (CARB), which has the responsibility for control of emissions from mobile sources (CARB 2000, p. 9), took the lead on addressing diesel emissions in the State of California. The first step to significantly reduce diesel emissions occurred in 2000 when CARB approved the "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" or Diesel Risk Reduction Plan. The two main goals of the Diesel Risk Reduction Plan are: 1) to get new diesel fueled engines to use state-of-the-art emission controls as well as low-sulfur diesel fuel and, 2) for existing diesel engines to be retrofitted with emission control features. Effects of meeting these goals set by CARB would be reducing the health effects experienced by Californians from diesel exhaust (CARB 2000).

Advanced Clean Cars

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025.

The program combines the control of smog-causing pollutants and GHGs with requirements for greater numbers of zero-emission vehicles (ZEVs). By 2025, when the rules will be fully implemented, the new automobiles will emit 40 percent fewer GHG emissions and 75 percent fewer smog-forming emissions (CARB ACCP).

The program also requires car manufacturers to offer for sale an increasing number of ZEVs each year, including battery electric, fuel cell, and plug-in hybrid electric vehicles (EV) (CARB ACCP).

In December 2012, CARB adopted regulations allowing car manufacturers to comply with California's GHG emissions requirements for model years 2017-2025 through compliance with the EPA GHG requirements for those same model years (CARB 2012). CARB staff also proposed the Advanced Clean Cars II program, which will update the state's passenger vehicle emission standards and ZEV requirements between 2026 and 2035. The regulation was approved in November 2022.

Low Carbon Fuel Standard

Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the Low Carbon Fuel Standard (LCFS) as a Discrete Early Action item under AB 32 and the final resolution (09-31) was issued on April 23, 2009 (CARB 2009). In 2009, CARB approved for adoption the LCFS regulation which became fully effective in April 2010 and is codified at Title 17, CCR, Sections 95480-95490. The LCFS will reduce greenhouse gas emissions by reducing the carbon intensity of

transportation fuels used in California by at least 10 percent by 2020. Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "lifecycle" of a transportation fuel. On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. Opponents argued that the LCFS violates the Supremacy Clause (US Constitution, Article VI, Clause 2)[12] and Commerce Clause (US Constitution, Article 1, Section 8, Clause 3)[13] of the U.S. Constitution by discriminating against fuel produced out-of-state. One of the district court's rulings preliminarily enjoined CARB from enforcing the regulation. One of the district court's rulings preliminarily enjoined CARB from enforcing the regulation. In January 2012, CARB appealed that decision to the Ninth Circuit Court of Appeals. On September 18, 2013, the Ninth Circuit issued its decision affirming the District Court's conclusion that LCFS ethanol and initial crude-oil provisions are not facially discriminatory but remanded to the District Court to determine whether the LCFS ethanol provisions are discriminatory in purpose and effect. Additionally, the Ninth Circuit remanded to the District Court with instructions to vacate the preliminary injunction against CARB's enforcement of the regulation (RM 2013).

California Energy Commission (CEC)

The CEC was formed by the Warren-Alquist Act (WAA), and is the State's primary energy policy and planning agency. WAA also requires EIRs to consider wasteful, inefficient, and unnecessary consumption of energy (WAA 2021, p. 73.) and was the driving force behind the creation of Appendix F to the CEQA Guidelines. CEC was established to address the State's energy challenges and is responsible for the creation of the State Energy Plan. The State Energy Plan identifies the emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The State Energy Plan recommends that the State assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the fewest environmental and energy costs. The State Energy Plan also identifies a number of strategies, including providing assistance to public agencies and fleet operators, encouraging urban designs that reduce vehicles miles traveled, and accommodating pedestrian and bicycle access.

California Public Utilities Commission (CPUC)

CPUC regulates investor-owned and public-owned electric and natural gas utilities operating in California, which includes SCG (CPUC Electric). The CPUC regulates the natural gas rates and natural gas services, including in-State transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering, and billing (CPUC-B). In 2008, the CPUC adopted the state's first "Long-Term Energy Efficiency Strategic Plan" for achieving energy savings in various sectors throughout California. In 2011, the Strategic Plan was updated to include a chapter related to lighting (CPUC EESP).

California Energy Code - Title 24 of the California Code of Regulations

The California Energy Code (Title 24, Part 6 of the California Code of Regulations was established in 1978 to reduce California's energy consumption. Energy use standards in the code, referred to as Building Energy Efficiency Standards, are updated on an approximately three-year cycle (CEC Standards). Energy consumption by new buildings in the State is regulated by The California Energy

[12]The Supremacy Clause establishes the U.S. Constitution, federal statues, and the U.S. Treaties as "the supreme law of the land," establishing that federal laws take precedence over state laws.

[13]The Commerce Clause grants the federal government the authority "To regulate Commerce within foreign Nations, and among the several States and with the Indian Tribes." Case law has determined that pollution and hazardous materials can be considered "commerce" because they can be produced in one state but dispersed or transported to other states.

Code via the Building Energy Efficiency Standards. These efficiency standards (commonly referred to as Title 24 standards) apply to newly constructed buildings and additions and alterations to existing buildings. (CEC 2022). They are designed to reduce wasteful, uneconomic, inefficient or unnecessary consumption of energy, and enhance outdoor and indoor environmental quality The recently adopted 2022 Building Energy Efficiency Standards (Energy Code), which went into effect January 1, 2023, focus on four key areas in new construction of homes and business by encouraging 1.) electric heat pump technology and use, 2.) establishing electric-ready requirements when natural gas is installed, 3.) expanding solar photovoltaic (PV) system and battery storage standards, and 4.) strengthening ventilation standards to improve indoor air quality. Specifically, the 2022 updates require all new homes be electric-ready. That means buildings with gas stoves have the electrical panels and wiring to support a switch to electric stoves. Further advancements and cost reductions will continue to expand electric options for heating, cooking, laundering, and EV charging to meet all Californians' needs. (CEC 2022) The Project will be subject to the 2022 Building Energy Efficiency Standards (California Code of Regulations Title 24, Part 6).

It is projected that the 2022 building efficiency standards will reduce 10 million metric tons of GHGs over 30 years. This reduction is equivalent to taking nearly 2.2 million cars off the road for a year. (CEC 2022) On a statewide basis throughout 2023, all measures for newly constructed buildings and altered components of existing buildings collectively would save approximately 33 million therms of fossil fuel natural gas and 1.3 billion kWh of electricity.[14] Local government agencies may adopt and enforce energy standards for new buildings, provided that standards meet or exceed those contained in Title 24. The City has adopted the California Code of Regulations Title 24.

Green Building Standards

The purpose of Title 24, specifically Part 11, known as the California Green Building Standards (CALGreen) Code, is to encourage sustainable construction practices that reduce negative impacts on the environment through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The CALGreen Code is applicable to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the State. Applicable requirements of the CALGreen Code include: electric vehicle (EV) charging station infrastructure for single family homes, EV charging space requirements for multifamily homes.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (AB 939) requires each jurisdiction in California to submit detailed solid waste planning documents for the California Department of Resources, Recycling, and Recovery's (CalRecycle) approval, set diversion requirements of 25 percent in 1995 and 50 percent in 2000, established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated (CalRecycle 2018). As of 2007, jurisdictional diversion rates are no longer calculated; with the passage of the Per Capita Disposal Measurement System (SB1016), only per capita disposal rates are measured. CalRecycle compares each jurisdiction's reported disposal tons to

[14] Per the Draft Environmental Impact Report Amendments to the Building Energy Efficiency Standards (**https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency**)

population to calculate per capita disposal in pounds per person per day (CalRecycle JD). The City achieved an annual per capita disposal rate of 5.0 pounds per day per resident, and 15.4 pounds per day per employee in 2021, the most recent data available (CalRecycle Jurupa Valley).

AB 939 further requires each city to prepare a Source Reduction and Recycling Element (SRRE) to describe how it would manage solid waste generated within the City (PRC 41000-41003). Each city's solid waste management must be consistent with the hierarchy of waste management practices of AB 939, which are (in order of priority): (1) source reduction; (2) recycling and composting; (3) environmentally safe transformation and environmentally safe land disposal, at the discretion of the city or county (PRC 40051). SRREs shall place primary emphasis on implementation of all feasible source reduction, recycling, and composting programs while identifying the amount of landfill and transformation capacity that will be needed for solid waste which cannot be reduced at the source, recycled, or composted. Each SRRE shall include, but is not limited to, all of the following components for solid waste generated in the jurisdiction of the plan: (a) A waste characterization component; (b) A source reduction component; (c) A recycling component; (d) A composting component; I A solid waste facility capacity component; (f) An education and public information component; (g) A funding component; and (h) A special waste component (PRC 41000-41003).California local jurisdictions are required to submit annual reports to CalRecycle to update it on their progress toward implementing the AB 939 goals (CalRecycle 2019).

AB 341 (2011) amended the AB 939 to include a provision declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter (PRC 41780.01) The state did not meet its 75 percent by 2020 recycling goal set out in AB 341. However, CalRecycle identified five strategies and three additional focus areas that can be pursued by the state to reach the 75 percent goal. (CalRecycle 2020.)

Renewable Portfolio Standard

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, again in 2011 under SBX1-2, in 2015 under SB 350, and again in 2018 under SB 100, California's Renewable Portfolio Standard (RPS) required retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020 (SB-1078, SB-1368). The 33 percent standard was consistent with the RPS goal established in the Scoping Plan (CARB 2008). Initially, the RPS provisions applied to investor-owned utilities, community choice aggregators, and electric service providers. SBX1-2 added, for the first time, publicly owned utilities to the entities subject to RPS.

Senate Bill 350 (SB 350), signed in 2015, increased the RPS from 33 percent in 2020 to 50 percent by 2030 and will double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation by 2030. (CARB 2017c, p. 2)

Senate Bill 100 (SB 100) was subsequently signed in 2018 and directs the California Public Utilities Commission (CPUC), CEC, and CARB to plan for 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 also accelerates the RPS to 50 percent by 2026 and to 60 percent target 2030. (SB-100)

Senate Bill 1

Senate Bill 1 of 2006 (SB 1) established the statewide California Solar Initiative, also required the California Energy Commission (CEC) to implement regulations that required sellers of production homes to offer a solar energy system option to all prospective homebuyers. Besides offering solar as an option to prospective homebuyers, sellers of homes constructed on land for which an application for a tentative

subdivision map has been deemed complete on or after January 1, 2011, must disclose to the prospective homebuyer the total installed cost of the solar option, the estimated cost savings associated with the solar energy system option, information about California solar energy system incentives, and information about the Go Solar California website. Sellers of production homes affected by this law may opt for the solar offset program rather than offer solar as an option to prospective homebuyers. The solar offset program requires sellers to install a solar system elsewhere which is equivalent to the aggregate capacity of solar that would have been installed in an affected subdivision if 20 percent of the buyers had opted for the solar option (SB-1).

Assembly Bill 1109

Assembly Bill 1109 (AB 1109), the Lighting Efficiency and Toxic Reduction Act, required the establishment of minimum energy efficiency standards for all general purpose lights. The standards are structured to reduce average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018 (AB-1109).

Senate Bill 350

Senate Bill 350 (SB 350), signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of Executive Order B-30-15. The objectives of SB 350 are (SB-350):

1. To increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources.
2. To double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

GHG Emissions Standard for Baseload Generation (SB 1368)

Senate Bill 1368 (SB 1368) (September 29, 2006) prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined-cycle natural gas power plant. This performance standard applies to electricity generated both within and outside of California and to publicly owned as well as investor-owned electric utilities (SB-1368).

Assembly Bill 1493

Known as “Pavley I,” AB 1493 standards were the nation’s first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that lower GHG emissions from new light-duty autos to the maximum extent feasible (AB-1493). Pavley regulations apply to the 2012 through 2016 model years. After adopting these initial greenhouse gas standards for passenger vehicles, CARB adopted continuing standards for future model years (refer to Advanced Clean Cars discussion, above).

Assembly Bill 1007- State Alternative Fuels

Assembly Bill (AB) 1007 requires the CEC to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with the California Air Resources Board and in consultation with other federal, state, and local agencies to reduce petroleum consumption; increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen); reduce GHG emissions; and increase in-state production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels; result in significant improvements in the energy efficiency of vehicles; and reduce trips and vehicle miles traveled through changes in travel

habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation proactively implements this plan (AB-1007).

Appliance Efficiency Regulations
California's Appliance Efficiency Regulations (California Code of Regulations [CCR] Title 20, Parts 1600–1608) contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California. (CEC Title 20)

3.3.3. Local

City of Jurupa Valley General Plan
The City's GP contains the following policy applicable to the proposed Project:

AQ 5.2 **Energy Conservation.** Encourage advanced energy conservation techniques and the incorporation of energy-efficient design elements for private and public developments, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling, and offer incentives, as appropriate.

3.4. Energy Demand Estimates

3.4.1. Short Term Analysis

Construction Related Energy
Project construction would require the use of construction equipment for grading, paving, as well as construction workers and vendors traveling to and from the Project site. Construction equipment requires diesel as the fuel source and construction worker and vendor trips use both gasoline and diesel fuel.

Fuel consumption from on-site heavy-duty construction equipment was calculated based on the equipment mix and usage factors provided in the CalEEMod construction output files attached herewith. The total horsepower was then multiplied by fuel usage estimates per horsepower-hour included in Table A9-3-E of the SCAQMD CEQA Air Quality Handbook. Fuel consumption from construction worker and vendor/delivery trucks was calculated using the trip rates and distances provided in the CalEEMod construction output files. Total vehicle miles traveled (VMT) was then calculated for each type of construction-related trip and divided by the corresponding county-specific miles per gallon factor using California Air Resources Board's (CARB's) EMFAC 2021 web-based model. EMFAC provides the total annual VMT and fuel consumed for each vehicle type. Consistent with CalEEMod, construction worker trips were assumed to include 25 percent light duty gasoline auto and 75 percent light duty gasoline trucks. Construction vendor trucks were assumed to be medium-duty and heavy-duty diesel trucks. Hauling trucks were assumed to be heavy-duty trucks. Please refer to detailed calculations attached in Appendix B.

As shown below and in Appendix B, a total of approximately 686,609 gallons of diesel fuel and approximately 623,153 gallons of gasoline are estimated to be consumed during Project construction.

Table 19 – Construction Energy Use

Fuel[a]	Fuel Consumption[a]
Diesel	

On-Road Construction Trips[b]	170,783 Gallons
Off-Road Construction Equipment[c]	515,825 Gallons
Diesel Total	**686,609 Gallons**
Gasoline	
On-Road Construction Trips[b]	623,153 Gallons
Off-Road Construction Equipment[d]	-
Gasoline Total	**623,153 Gallons**

Notes:
[a] Source: Table 1 – Total Construction-Related Fuel Consumption, Appendix B.
[b] On-road mobile source fuel use based on VMT from CalEEMod for construction in 2023 and fleet-average fuel consumption in gallons per mile from EMFAC2017 web-based data for Riverside County. See Table 2 – On Road Construction Trip Estimates, Appendix B for calculation details.
[c] Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
[d] All emissions from off-road construction equipment were assumed to be diesel.

Fuel consumption from on-site heavy-duty construction equipment and construction would be temporary in nature and uses a limited number of equipment, which would represent a negligible demand on energy resources. Construction equipment is also required to comply with regulations limiting idling to five minutes or less (13 CCR § 2449(d)(3)). Furthermore, there are no unusual Project site characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the state. For comparison, the State of California consumed 12.7 billion gallons of gasoline and 2.8 billion gallons of diesel fuel in 2021, which is the most recent published data.[15] Thus, the fuel usage during Project construction would account for a negligible percent of the existing gasoline and diesel fuel related energy consumption in California. Furthermore, it is expected that construction-related fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

3.4.2.Long Term Analysis

Operation Related Energy

Energy consumption related to Project operations includes onsite electricity and natural gas usage and transportation fuel consumption.

Annual electricity and natural gas consumption were calculated using demand factors provided in the CalEEMod output in Appendix A. The Project's electrical consumption was estimated to be approximately 15,562,465 kilowatt-hours (kWh) of electricity per year, this is the sum of the building electricity (14,564,772 kWh/year) and electricity related to the Project's water consumption (997,693 kWh/year). Additionally, the Project's natural gas consumption was estimated to be approximately 37,200,110 kilo-British thermal units (kBTUs) or approximately 372,090 therms. Please refer to detailed calculations in Appendix B.

In comparison to the Project, Southern California Edison (SCE), who provides service to the City, consumed approximately 81.1 billion kWh and the Southern California Gas Company consumed

[15] California Department of Tax and Fee Administration, *Fuel Taxes, Statistics and Reports*. Available at https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed January 2023.

approximately 5.1 billion therms in 2021.[16] At full build-out, the Project site's energy demand would be a negligible amount of the existing electricity and the natural gas demand in the respective service area.

Energy impacts associated with transportation during operation were also assessed using the traffic data contained in the CalEEMod output attached herewith. Based on the annual VMT, gasoline and diesel consumption rates were calculated using the Riverside County-specific miles per gallon in EMFAC2021. As shown in Appendix B, a total of approximately 3,070,977 gallons of gasoline fuel and approximately 580,650 gallons of diesel fuel are estimated to be consumed each year. As stated above, the State of California consumed approximately 12.7 billion gallons of gasoline and 2.7 billion gallons of diesel fuel in 2021. Thus, the annual fuel usage during Project operation would account for a negligible percent of the existing gasoline and diesel fuel related energy consumption in California.

The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other residential land use projects of similar scale and configuration. Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

3.5. Findings and Conclusions

3.5.1. Evaluation of Thresholds

The following thresholds and discussion were included in this study to assist in the project's evaluation of impacts under CEQA:

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

  As evaluated in the preceding analyses, the Project construction and operation would not result in the inefficient, wasteful, or unnecessary consumption of energy. Therefore, impacts would be considered less than significant.

- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

  The proposed Project would be required to comply with City, state and federal energy conservation measures related to construction and operations, as noted above. Many of the regulations regarding energy efficiency are focused on increasing building efficiency and renewable energy generation, promoting sustainability through energy conservation measures, as well as reducing water consumption and VMT and increasing use of alternative fuels. The California Energy Code building energy efficiency standards include provisions applicable to all buildings, residential and non-residential, which are mandatory requirements for efficiency and design. Further, the proposed Project will comply with the CALGreen code. This would be accomplished through implementation of energy reduction measures, such as energy efficient lighting and lighting control systems, appliances, and providing EV charging station infrastructure. The Project also reduces vehicle fuel usage due to

[16] California Energy Commission, *California Energy Consumption Database*, 2021. Available at **https://ecdms.energy.ca.gov/**, accessed January 2023.

compliance with State regulatory programs. The vehicles used by future residents would be subject to AB 1493 ("the Pavley Standard") which requires reduction in GHG emissions from non-commercial passenger vehicles and light-duty trucks of model year 2009 and thereafter. Executive Order S-01-07 that went into effect in 2010 required a reduction in the carbon intensity of transportation fuels used in California by at least 10 percent by 2020. The Advanced Clean Cars program, introduced in 2012, combines the control of smog, soot causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025 and Advanced Clean Cars II requirements extend beyond 2030.

Therefore, impacts to obstructing a state or local plan for renewable energy or energy efficiency during construction or operation would be less than significant.

4. References

4.1. References Cited

The following documents were referred to as general information sources during preparation of this document. They are available for public review at the locations abbreviated after each listing and spelled out at the end of this section. Some of these documents are also available at other public agency offices.

AB 32	Legislative Counsel of California, *Bill Information: AB 32 – California Global Warming Solutions Act of 2006*, September 2006. (Available at **http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf**, accessed April 21, 2023.)
AB-1007	Legislative Counsel of California, *California Assembly Bill 1007*, October 2007. (Available at **https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720060AB1007**, accessed April 20, 2023.)
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APPENDIX A

Vernola Ranch SP - Phase 1 Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Vernola Ranch SP - Phase 1
Construction Start Date	6/1/2024
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	18.8
Location	33.982995736247204, -117.54622676091887
County	Riverside-South Coast
City	Jurupa Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5440
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.8

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

Other Non-Asphalt Surfaces	4,645	1000sqft	107	0.00	—	591,109	—	—
Parking Lot	1,448	1000sqft	33.2	0.00	—	—	—	—
Apartments Low Rise	604	Dwelling Unit	18.1	604,000	—	—	1,951	—
Condo/Townhouse	398	Dwelling Unit	18.5	398,000	—	—	1,286	—
Single Family Housing	185	Dwelling Unit	18.6	333,000	2,166,879	—	598	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.2	21.2	139	115	0.27	5.92	13.4	14.5	5.44	3.20	7.79	—	29,706	29,706	1.21	1.10	60.0	29,817
Mit.	12.0	21.2	99.4	116	0.27	3.68	13.4	14.5	3.40	3.20	5.75	—	29,706	29,706	1.21	1.10	60.0	29,817
% Reduced	30%	—	28%	> -0.5%	—	38%	—	—	38%	—	26%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.2	21.0	139	114	0.27	5.92	13.4	14.5	5.44	3.20	7.79	—	29,642	29,642	1.21	1.10	1.55	29,750

Mit.	12.0	21.0	99.5	114	0.27	3.68	13.4	14.5	3.40	3.20	5.75	—	29,642	29,642	1.21	1.10	1.55	29,750
% Reduced	30%	—	28%	> -0.5%	—	38%	—	—	38%	—	26%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.52	14.7	43.1	63.5	0.08	1.83	9.49	10.2	1.68	2.26	2.88	—	15,415	15,415	0.62	0.79	17.8	15,676
Mit.	5.52	14.7	32.3	63.5	0.08	1.22	9.49	10.2	1.12	2.26	2.88	—	15,415	15,415	0.62	0.79	17.8	15,676
% Reduced	—	—	25%	—	—	33%	—	—	33%	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.01	2.69	7.87	11.6	0.01	0.33	1.73	1.85	0.31	0.41	0.53	—	2,552	2,552	0.10	0.13	2.95	2,595
Mit.	1.01	2.69	5.90	11.6	0.01	0.22	1.73	1.85	0.20	0.41	0.53	—	2,552	2,552	0.10	0.13	2.95	2,595
% Reduced	—	—	25%	—	—	33%	—	—	33%	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	17.2	14.4	139	115	0.27	5.92	8.12	14.0	5.44	2.69	7.79	—	29,706	29,706	1.21	0.26	3.95	29,817
2025	8.58	21.2	33.4	106	0.08	1.06	13.4	14.5	0.98	3.20	4.18	—	22,827	22,827	0.87	1.10	60.0	23,238
2026	7.77	20.9	31.4	100	0.08	0.94	13.4	14.4	0.87	3.20	4.06	—	22,477	22,477	0.87	1.08	54.6	22,876
2027	7.46	20.6	29.8	95.1	0.08	0.84	13.4	14.3	0.77	3.20	3.97	—	22,165	22,165	0.46	1.06	49.3	22,541
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	17.2	14.4	139	114	0.27	5.92	11.6	14.0	5.44	2.78	7.79	—	29,642	29,642	1.21	1.05	1.48	29,750

2025	8.15	21.0	40.7	89.6	0.10	1.45	13.4	14.5	1.33	3.20	4.18	—	21,775	21,775	0.89	1.10	1.55	22,112
2026	7.56	20.6	32.0	83.9	0.08	0.94	13.4	14.4	0.87	3.20	4.06	—	21,430	21,430	0.50	1.10	1.42	21,773
2027	7.24	20.3	30.4	79.8	0.08	0.84	13.4	14.3	0.77	3.20	3.97	—	21,140	21,140	0.48	1.06	1.28	21,468
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.45	4.67	43.1	37.9	0.08	1.83	3.01	4.84	1.68	0.90	2.59	—	9,521	9,521	0.39	0.13	1.36	9,570
2025	5.52	12.2	24.7	63.5	0.06	0.78	9.10	9.88	0.72	2.16	2.88	—	15,340	15,340	0.62	0.77	17.8	15,604
2026	5.39	14.7	23.2	61.6	0.06	0.67	9.49	10.2	0.62	2.26	2.87	—	15,415	15,415	0.36	0.79	16.8	15,676
2027	5.18	14.5	22.0	58.7	0.06	0.60	9.49	10.1	0.55	2.26	2.81	—	15,205	15,205	0.34	0.75	15.2	15,454
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.99	0.85	7.87	6.92	0.01	0.33	0.55	0.88	0.31	0.17	0.47	—	1,576	1,576	0.06	0.02	0.23	1,584
2025	1.01	2.22	4.50	11.6	0.01	0.14	1.66	1.80	0.13	0.39	0.53	—	2,540	2,540	0.10	0.13	2.95	2,583
2026	0.98	2.69	4.23	11.3	0.01	0.12	1.73	1.85	0.11	0.41	0.52	—	2,552	2,552	0.06	0.13	2.79	2,595
2027	0.94	2.65	4.01	10.7	0.01	0.11	1.73	1.84	0.10	0.41	0.51	—	2,517	2,517	0.06	0.12	2.52	2,559

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	12.0	10.3	99.4	116	0.27	3.68	8.12	11.8	3.40	2.69	5.75	—	29,706	29,706	1.21	0.26	3.95	29,817
2025	8.58	21.2	33.4	106	0.08	1.06	13.4	14.5	0.98	3.20	4.18	—	22,827	22,827	0.87	1.10	60.0	23,238
2026	7.77	20.9	31.4	100	0.08	0.94	13.4	14.4	0.87	3.20	4.06	—	22,477	22,477	0.87	1.08	54.6	22,876
2027	7.46	20.6	29.8	95.1	0.08	0.84	13.4	14.3	0.77	3.20	3.97	—	22,165	22,165	0.46	1.06	49.3	22,541
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	12.0	10.2	99.5	114	0.27	3.68	11.6	13.3	3.40	2.78	5.75	—	29,642	29,642	1.21	1.05	1.48	29,750

2025	8.15	21.0	40.7	89.6	0.10	1.45	13.4	14.5	1.33	3.20	4.18	—	21,775	21,775	0.89	1.10	1.55	22,112
2026	7.56	20.6	32.0	83.9	0.08	0.94	13.4	14.4	0.87	3.20	4.06	—	21,430	21,430	0.50	1.10	1.42	21,773
2027	7.24	20.3	30.4	79.8	0.08	0.84	13.4	14.3	0.77	3.20	3.97	—	21,140	21,140	0.48	1.06	1.28	21,468
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.04	3.52	32.3	38.0	0.08	1.22	3.01	4.23	1.12	0.90	2.03	—	9,521	9,521	0.39	0.13	1.36	9,570
2025	5.52	12.2	24.7	63.5	0.06	0.78	9.10	9.88	0.72	2.16	2.88	—	15,340	15,340	0.62	0.77	17.8	15,604
2026	5.39	14.7	23.2	61.6	0.06	0.67	9.49	10.2	0.62	2.26	2.87	—	15,415	15,415	0.36	0.79	16.8	15,676
2027	5.18	14.5	22.0	58.7	0.06	0.60	9.49	10.1	0.55	2.26	2.81	—	15,205	15,205	0.34	0.75	15.2	15,454
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.74	0.64	5.90	6.94	0.01	0.22	0.55	0.77	0.20	0.17	0.37	—	1,576	1,576	0.06	0.02	0.23	1,584
2025	1.01	2.22	4.50	11.6	0.01	0.14	1.66	1.80	0.13	0.39	0.53	—	2,540	2,540	0.10	0.13	2.95	2,583
2026	0.98	2.69	4.23	11.3	0.01	0.12	1.73	1.85	0.11	0.41	0.52	—	2,552	2,552	0.06	0.13	2.79	2,595
2027	0.94	2.65	4.01	10.7	0.01	0.11	1.73	1.84	0.10	0.41	0.51	—	2,517	2,517	0.06	0.12	2.52	2,559

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	57.2	82.1	73.4	629	1.64	2.39	53.8	56.2	2.33	9.54	11.9	635	187,233	187,868	70.6	6.82	509	192,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	48.6	73.8	76.9	459	1.54	2.36	53.8	56.2	2.30	9.54	11.8	635	177,457	178,092	70.7	7.02	22.5	181,973
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	46.5	72.6	62.9	468	1.34	1.54	48.0	49.5	1.48	8.51	10.00	635	151,526	152,160	70.0	6.35	202	156,005

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.49	13.3	11.5	85.4	0.24	0.28	8.76	9.04	0.27	1.55	1.82	105	25,087	25,192	11.6	1.05	33.4	25,828

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	49.1	43.4	56.8	555	1.53	1.07	53.8	54.9	1.00	9.54	10.5	—	156,607	156,607	4.92	6.31	500	159,110
Area	7.37	38.3	10.3	71.5	0.06	0.81	—	0.81	0.81	—	0.81	0.00	12,456	12,456	0.24	0.02	—	12,469
Energy	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	17,584	17,584	1.62	0.13	—	17,662
Water	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Waste	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Total	57.2	82.1	73.4	629	1.64	2.39	53.8	56.2	2.33	9.54	11.9	635	187,233	187,868	70.6	6.82	509	192,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	46.7	41.0	60.9	452	1.44	1.07	53.8	54.9	1.00	9.54	10.5	—	147,011	147,011	5.00	6.51	13.0	149,089
Area	1.13	32.4	9.67	4.12	0.06	0.78	—	0.78	0.78	—	0.78	0.00	12,276	12,276	0.23	0.02	—	12,288
Energy	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	17,584	17,584	1.62	0.13	—	17,662
Water	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Waste	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Total	48.6	73.8	76.9	459	1.54	2.36	53.8	56.2	2.30	9.54	11.8	635	177,457	178,092	70.7	7.02	22.5	181,973
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	41.4	36.4	55.5	419	1.29	0.95	48.0	49.0	0.90	8.51	9.41	—	132,391	132,391	4.48	5.87	192	134,443
Area	4.35	35.9	1.10	46.4	0.01	0.07	—	0.07	0.08	—	0.08	0.00	964	964	0.02	< 0.005	—	965
Energy	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	17,584	17,584	1.62	0.13	—	17,662
Water	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Waste	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Total	46.5	72.6	62.9	468	1.34	1.54	48.0	49.5	1.48	8.51	10.00	635	151,526	152,160	70.0	6.35	202	156,005
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.56	6.64	10.1	76.5	0.24	0.17	8.76	8.93	0.16	1.55	1.72	—	21,919	21,919	0.74	0.97	31.9	22,259
Area	0.79	6.55	0.20	8.48	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	160	160	< 0.005	< 0.005	—	160
Energy	0.14	0.07	1.16	0.49	0.01	0.09	—	0.09	0.09	—	0.09	—	2,911	2,911	0.27	0.02	—	2,924
Water	—	—	—	—	—	—	—	—	—	—	—	23.8	97.1	121	2.45	0.06	—	200
Waste	—	—	—	—	—	—	—	—	—	—	—	81.2	0.00	81.2	8.12	0.00	—	284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.58	1.58
Total	8.49	13.3	11.5	85.4	0.24	0.28	8.76	9.04	0.27	1.55	1.82	105	25,087	25,192	11.6	1.05	33.4	25,828

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	49.1	43.4	56.8	555	1.53	1.07	53.8	54.9	1.00	9.54	10.5	—	156,607	156,607	4.92	6.31	500	159,110
Area	7.37	38.3	10.3	71.5	0.06	0.81	—	0.81	0.81	—	0.81	0.00	12,456	12,456	0.24	0.02	—	12,469
Energy	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	17,584	17,584	1.62	0.13	—	17,662
Water	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Waste	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56

Total	57.2	82.1	73.4	629	1.64	2.39	53.8	56.2	2.33	9.54	11.9	635	187,233	187,868	70.6	6.82	509	192,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	46.7	41.0	60.9	452	1.44	1.07	53.8	54.9	1.00	9.54	10.5	—	147,011	147,011	5.00	6.51	13.0	149,089
Area	1.13	32.4	9.67	4.12	0.06	0.78	—	0.78	0.78	—	0.78	0.00	12,276	12,276	0.23	0.02	—	12,288
Energy	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	17,584	17,584	1.62	0.13	—	17,662
Water	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Waste	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Total	48.6	73.8	76.9	459	1.54	2.36	53.8	56.2	2.30	9.54	11.8	635	177,457	178,092	70.7	7.02	22.5	181,973
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	41.4	36.4	55.5	419	1.29	0.95	48.0	49.0	0.90	8.51	9.41	—	132,391	132,391	4.48	5.87	192	134,443
Area	4.35	35.9	1.10	46.4	0.01	0.07	—	0.07	0.08	—	0.08	0.00	964	964	0.02	< 0.005	—	965
Energy	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	17,584	17,584	1.62	0.13	—	17,662
Water	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Waste	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Total	46.5	72.6	62.9	468	1.34	1.54	48.0	49.5	1.48	8.51	10.00	635	151,526	152,160	70.0	6.35	202	156,005
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.56	6.64	10.1	76.5	0.24	0.17	8.76	8.93	0.16	1.55	1.72	—	21,919	21,919	0.74	0.97	31.9	22,259
Area	0.79	6.55	0.20	8.48	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	160	160	< 0.005	< 0.005	—	160
Energy	0.14	0.07	1.16	0.49	0.01	0.09	—	0.09	0.09	—	0.09	—	2,911	2,911	0.27	0.02	—	2,924
Water	—	—	—	—	—	—	—	—	—	—	—	23.8	97.1	121	2.45	0.06	—	200
Waste	—	—	—	—	—	—	—	—	—	—	—	81.2	0.00	81.2	8.12	0.00	—	284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.58	1.58
Total	8.49	13.3	11.5	85.4	0.24	0.28	8.76	9.04	0.27	1.55	1.82	105	25,087	25,192	11.6	1.05	33.4	25,828

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.25	2.73	25.7	22.5	0.04	1.09	—	1.09	1.00	—	1.00	—	3,758	3,758	0.15	0.03	—	3,771
Demolition	—	—	—	—	—	—	1.05	1.05	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.41	1.23	< 0.005	0.06	—	0.06	0.05	—	0.05	—	206	206	0.01	< 0.005	—	207
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.26	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.1	34.1	< 0.005	< 0.005	—	34.2
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.14	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.02	1.50	0.36	0.01	0.03	0.34	0.37	0.03	0.10	0.12	—	1,327	1,327	0.02	0.21	2.81	1,394
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.03	14.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	72.7	72.7	< 0.005	0.01	0.07	76.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.43	2.43	< 0.005	< 0.005	< 0.005	2.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.6

3.2. Demolition (2024) - Mitigated

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

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

Off-Road Equipment	3.25	2.73	25.7	22.5	0.04	1.09	—	1.09	1.00	—	1.00	—	3,758	3,758	0.15	0.03	—	3,771
Demolition	—	—	—	—	—	—	1.05	1.05	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.41	1.23	< 0.005	0.06	—	0.06	0.05	—	0.05	—	206	206	0.01	< 0.005	—	207
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.26	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.1	34.1	< 0.005	< 0.005	—	34.2
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.14	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.02	1.50	0.36	0.01	0.03	0.34	0.37	0.03	0.10	0.12	—	1,327	1,327	0.02	0.21	2.81	1,394

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.03	14.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	72.7	72.7	< 0.005	0.01	0.07	76.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.43	2.43	< 0.005	< 0.005	< 0.005	2.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.6

3.3. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.48	3.76	36.7	33.7	0.05	1.63	—	1.63	1.50	—	1.50	—	5,628	5,628	0.23	0.05	—	5,648
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	2.01	1.85	< 0.005	0.09	—	0.09	0.08	—	0.08	—	308	308	0.01	< 0.005	—	309
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.37	0.34	< 0.005	0.02	—	0.02	0.01	—	0.01	—	51.1	51.1	< 0.005	< 0.005	—	51.2
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.14	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.03	14.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.43	2.43	< 0.005	< 0.005	< 0.005	2.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.48	3.76	36.7	33.7	0.05	1.63	—	1.63	1.50	—	1.50	—	5,628	5,628	0.23	0.05	—	5,648
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	2.01	1.85	< 0.005	0.09	—	0.09	0.08	—	0.08	—	308	308	0.01	< 0.005	—	309
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.14	0.14	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.37	0.34	< 0.005	0.02	—	0.02	0.01	—	0.01	—	51.1	51.1	< 0.005	< 0.005	—	51.2
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.67	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.14	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.03	14.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.43	2.43	< 0.005	< 0.005	< 0.005	2.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	16.9	14.2	139	111	0.27	5.92	—	5.92	5.44	—	5.44	—	28,914	28,914	1.17	0.23	—	29,013
Dust From Material Movement	—	—	—	—	—	—	7.41	7.41	—	2.18	2.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	16.9	14.2	139	111	0.27	5.92	—	5.92	5.44	—	5.44	—	28,914	28,914	1.17	0.23	—	29,013
Dust From Material Movement	—	—	—	—	—	—	7.41	7.41	—	2.18	2.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.62	3.88	38.0	30.3	0.07	1.62	—	1.62	1.49	—	1.49	—	7,922	7,922	0.32	0.06	—	7,949
Dust From Material Movement	—	—	—	—	—	—	2.03	2.03	—	0.60	0.60	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.71	6.93	5.53	0.01	0.30	—	0.30	0.27	—	0.27	—	1,312	1,312	0.05	0.01	—	1,316
Dust From Material Movement	—	—	—	—	—	—	0.37	0.37	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.27	4.59	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	792	792	0.03	0.03	3.14	804
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.26	0.31	3.47	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	728	728	0.03	0.03	0.08	737
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.00	0.00	0.00	0.19	0.19	0.00	0.05	0.05	—	202	202	0.01	0.01	0.37	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	33.4	33.4	< 0.005	< 0.005	0.06	33.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	11.7	9.97	99.2	111	0.27	3.68	—	3.68	3.40	—	3.40	—	28,914	28,914	1.17	0.23	—	29,013
Dust From Material Movement	—	—	—	—	—	—	7.41	7.41	—	2.18	2.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	11.7	9.97	99.2	111	0.27	3.68	—	3.68	3.40	—	3.40	—	28,914	28,914	1.17	0.23	—	29,013
Dust From Material Movement	—	—	—	—	—	—	7.41	7.41	—	2.18	2.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.21	2.73	27.2	30.4	0.07	1.01	—	1.01	0.93	—	0.93	—	7,922	7,922	0.32	0.06	—	7,949

Dust From Material Movement	—	—	—	—	—	—	2.03	2.03	—	0.60	0.60	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.96	5.55	0.01	0.18	—	0.18	0.17	—	0.17	—	1,312	1,312	0.05	0.01	—	1,316
Dust From Material Movement	—	—	—	—	—	—	0.37	0.37	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.27	4.59	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	792	792	0.03	0.03	3.14	804
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.26	0.31	3.47	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	728	728	0.03	0.03	0.08	737
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.00	0.00	0.00	0.19	0.19	0.00	0.05	0.05	—	202	202	0.01	0.01	0.37	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	33.4	33.4	< 0.005	< 0.005	0.06	33.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.86	1.00	< 0.005	0.04	—	0.04	0.03	—	0.03	—	185	185	0.01	< 0.005	—	186
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.7	30.7	< 0.005	< 0.005	—	30.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.20	3.80	4.48	49.7	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	10,424	10,424	0.50	0.39	1.17	10,554
Vendor	0.17	0.11	4.67	1.42	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,942	3,942	0.09	0.59	0.29	4,121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.16	1.84	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	372	372	0.02	0.01	0.68	377
Vendor	0.01	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	139	139	< 0.005	0.02	0.17	145
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.34	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	61.6	61.6	< 0.005	< 0.005	0.11	62.4
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.0	23.0	< 0.005	< 0.005	0.03	24.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.10	2.59	24.3	28.5	0.05	1.08	—	1.08	0.99	—	0.99	—	5,261	5,261	0.21	0.04	—	5,279

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.86	1.00	< 0.005	0.04	—	0.04	0.03	—	0.03	—	185	185	0.01	< 0.005	—	186
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.7	30.7	< 0.005	< 0.005	—	30.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.20	3.80	4.48	49.7	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	10,424	10,424	0.50	0.39	1.17	10,554
Vendor	0.17	0.11	4.67	1.42	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,942	3,942	0.09	0.59	0.29	4,121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.16	1.84	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	372	372	0.02	0.01	0.68	377
Vendor	0.01	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	139	139	< 0.005	0.02	0.17	145
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.34	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	61.6	61.6	< 0.005	< 0.005	0.11	62.4
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.0	23.0	< 0.005	< 0.005	0.03	24.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.73	16.2	20.2	0.04	0.67	—	0.67	0.61	—	0.61	—	3,758	3,758	0.15	0.03	—	3,771
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	0.32	2.95	3.69	0.01	0.12	—	0.12	0.11	—	0.11	—	622	622	0.03	0.01	—	624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.24	3.53	3.45	60.9	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	11,106	11,106	0.46	0.39	40.8	11,275
Vendor	0.18	0.08	4.26	1.32	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,882	3,882	0.09	0.59	11.0	4,071
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.73	3.32	3.80	46.0	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	10,210	10,210	0.48	0.39	1.06	10,340
Vendor	0.17	0.08	4.46	1.36	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,885	3,885	0.09	0.59	0.29	4,063
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.64	2.35	2.95	34.7	0.00	0.00	7.27	7.27	0.00	1.70	1.70	—	7,386	7,386	0.34	0.28	12.6	7,490
Vendor	0.12	0.06	3.18	0.96	0.02	0.04	0.77	0.81	0.04	0.21	0.25	—	2,774	2,774	0.06	0.42	3.41	2,904
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.48	0.43	0.54	6.34	0.00	0.00	1.33	1.33	0.00	0.31	0.31	—	1,223	1,223	0.06	0.05	2.08	1,240
Vendor	0.02	0.01	0.58	0.17	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	459	459	0.01	0.07	0.56	481
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

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

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

Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	22.6	28.3	0.05	0.93	—	0.93	0.86	—	0.86	—	5,261	5,261	0.21	0.04	—	5,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.73	16.2	20.2	0.04	0.67	—	0.67	0.61	—	0.61	—	3,758	3,758	0.15	0.03	—	3,771
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	0.32	2.95	3.69	0.01	0.12	—	0.12	0.11	—	0.11	—	622	622	0.03	0.01	—	624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.24	3.53	3.45	60.9	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	11,106	11,106	0.46	0.39	40.8	11,275
Vendor	0.18	0.08	4.26	1.32	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,882	3,882	0.09	0.59	11.0	4,071
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.73	3.32	3.80	46.0	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	10,210	10,210	0.48	0.39	1.06	10,340

Vendor	0.17	0.08	4.46	1.36	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,885	3,885	0.09	0.59	0.29	4,063
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.64	2.35	2.95	34.7	0.00	0.00	7.27	7.27	0.00	1.70	1.70	—	7,386	7,386	0.34	0.28	12.6	7,490
Vendor	0.12	0.06	3.18	0.96	0.02	0.04	0.77	0.81	0.04	0.21	0.25	—	2,774	2,774	0.06	0.42	3.41	2,904
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.48	0.43	0.54	6.34	0.00	0.00	1.33	1.33	0.00	0.31	0.31	—	1,223	1,223	0.06	0.05	2.08	1,240
Vendor	0.02	0.01	0.58	0.17	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	459	459	0.01	0.07	0.56	481
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.76	2.31	21.3	28.1	0.05	0.82	—	0.82	0.75	—	0.75	—	5,260	5,260	0.21	0.04	—	5,278
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.76	2.31	21.3	28.1	0.05	0.82	—	0.82	0.75	—	0.75	—	5,260	5,260	0.21	0.04	—	5,278
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.97	1.65	15.2	20.1	0.04	0.58	—	0.58	0.54	—	0.54	—	3,757	3,757	0.15	0.03	—	3,770
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.78	3.67	0.01	0.11	—	0.11	0.10	—	0.10	—	622	622	0.03	0.01	—	624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.71	3.34	3.09	56.6	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	10,868	10,868	0.46	0.37	36.8	11,028
Vendor	0.18	0.08	4.08	1.27	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,820	3,820	0.09	0.59	10.4	4,008
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.54	3.14	3.45	42.9	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	9,993	9,993	0.16	0.39	0.96	10,115
Vendor	0.17	0.08	4.25	1.30	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,822	3,822	0.09	0.59	0.27	4,001
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.51	2.23	2.69	32.1	0.00	0.00	7.27	7.27	0.00	1.70	1.70	—	7,229	7,229	0.11	0.28	11.4	7,326
Vendor	0.12	0.05	3.05	0.92	0.02	0.04	0.77	0.81	0.04	0.21	0.25	—	2,729	2,729	0.06	0.42	3.21	2,860
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.41	0.49	5.85	0.00	0.00	1.33	1.33	0.00	0.31	0.31	—	1,197	1,197	0.02	0.05	1.88	1,213

Vendor	0.02	0.01	0.56	0.17	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	452	452	0.01	0.07	0.53	473
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.76	2.31	21.3	28.1	0.05	0.82	—	0.82	0.75	—	0.75	—	5,260	5,260	0.21	0.04	—	5,278
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.76	2.31	21.3	28.1	0.05	0.82	—	0.82	0.75	—	0.75	—	5,260	5,260	0.21	0.04	—	5,278
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.97	1.65	15.2	20.1	0.04	0.58	—	0.58	0.54	—	0.54	—	3,757	3,757	0.15	0.03	—	3,770
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.78	3.67	0.01	0.11	—	0.11	0.10	—	0.10	—	622	622	0.03	0.01	—	624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.71	3.34	3.09	56.6	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	10,868	10,868	0.46	0.37	36.8	11,028
Vendor	0.18	0.08	4.08	1.27	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,820	3,820	0.09	0.59	10.4	4,008
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.54	3.14	3.45	42.9	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	9,993	9,993	0.16	0.39	0.96	10,115
Vendor	0.17	0.08	4.25	1.30	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,822	3,822	0.09	0.59	0.27	4,001
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.51	2.23	2.69	32.1	0.00	0.00	7.27	7.27	0.00	1.70	1.70	—	7,229	7,229	0.11	0.28	11.4	7,326
Vendor	0.12	0.05	3.05	0.92	0.02	0.04	0.77	0.81	0.04	0.21	0.25	—	2,729	2,729	0.06	0.42	3.21	2,860
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.41	0.49	5.85	0.00	0.00	1.33	1.33	0.00	0.31	0.31	—	1,197	1,197	0.02	0.05	1.88	1,213
Vendor	0.02	0.01	0.56	0.17	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	452	452	0.01	0.07	0.53	473
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2027) - Unmitigated

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

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

Off-Road Equipment	2.66	2.22	20.3	28.1	0.05	0.73	—	0.73	0.67	—	0.67	—	5,259	5,259	0.21	0.04	—	5,277
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.66	2.22	20.3	28.1	0.05	0.73	—	0.73	0.67	—	0.67	—	5,259	5,259	0.21	0.04	—	5,277
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.59	14.5	20.1	0.04	0.52	—	0.52	0.48	—	0.48	—	3,757	3,757	0.15	0.03	—	3,770
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.65	3.66	0.01	0.10	—	0.10	0.09	—	0.09	—	622	622	0.03	0.01	—	624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.55	3.16	2.74	52.3	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	10,667	10,667	0.12	0.37	33.1	10,814
Vendor	0.17	0.08	3.92	1.23	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,750	3,750	0.09	0.56	9.55	3,929
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.38	2.99	3.09	39.6	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	9,810	9,810	0.14	0.37	0.86	9,926

Vendor	0.17	0.07	4.10	1.27	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,753	3,753	0.09	0.56	0.25	3,922
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.41	2.13	2.44	29.7	0.00	0.00	7.27	7.27	0.00	1.70	1.70	—	7,096	7,096	0.10	0.27	10.2	7,188
Vendor	0.12	0.05	2.92	0.89	0.02	0.04	0.77	0.81	0.04	0.21	0.25	—	2,679	2,679	0.06	0.40	2.94	2,803
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.39	0.45	5.41	0.00	0.00	1.33	1.33	0.00	0.31	0.31	—	1,175	1,175	0.02	0.04	1.69	1,190
Vendor	0.02	0.01	0.53	0.16	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	444	444	0.01	0.07	0.49	464
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.66	2.22	20.3	28.1	0.05	0.73	—	0.73	0.67	—	0.67	—	5,259	5,259	0.21	0.04	—	5,277
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.66	2.22	20.3	28.1	0.05	0.73	—	0.73	0.67	—	0.67	—	5,259	5,259	0.21	0.04	—	5,277
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.59	14.5	20.1	0.04	0.52	—	0.52	0.48	—	0.48	—	3,757	3,757	0.15	0.03	—	3,770
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.65	3.66	0.01	0.10	—	0.10	0.09	—	0.09	—	622	622	0.03	0.01	—	624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.55	3.16	2.74	52.3	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	10,667	10,667	0.12	0.37	33.1	10,814
Vendor	0.17	0.08	3.92	1.23	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,750	3,750	0.09	0.56	9.55	3,929
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.38	2.99	3.09	39.6	0.00	0.00	10.3	10.3	0.00	2.41	2.41	—	9,810	9,810	0.14	0.37	0.86	9,926
Vendor	0.17	0.07	4.10	1.27	0.03	0.06	1.09	1.14	0.06	0.30	0.36	—	3,753	3,753	0.09	0.56	0.25	3,922
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.41	2.13	2.44	29.7	0.00	0.00	7.27	7.27	0.00	1.70	1.70	—	7,096	7,096	0.10	0.27	10.2	7,188
Vendor	0.12	0.05	2.92	0.89	0.02	0.04	0.77	0.81	0.04	0.21	0.25	—	2,679	2,679	0.06	0.40	2.94	2,803
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.39	0.45	5.41	0.00	0.00	1.33	1.33	0.00	0.31	0.31	—	1,175	1,175	0.02	0.04	1.69	1,190

Vendor	0.02	0.01	0.53	0.16	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	444	444	0.01	0.07	0.49	464
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Paving (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.12	10.2	12.8	0.02	0.50	—	0.50	0.46	—	0.46	—	2,160	2,160	0.09	0.02	—	2,167
Paving	—	2.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	76.1	76.1	< 0.005	< 0.005	—	76.3
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.6	12.6	< 0.005	< 0.005	—	12.6
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	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.26	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	265	265	0.01	0.01	0.03	268
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.44	9.44	< 0.005	< 0.005	0.02	9.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	1.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Paving (2024) - Mitigated

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

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

Off-Road Equipment	1.33	1.12	10.2	12.8	0.02	0.50	—	0.50	0.46	—	0.46	—	2,160	2,160	0.09	0.02	—	2,167
Paving	—	2.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	76.1	76.1	< 0.005	< 0.005	—	76.3
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.6	12.6	< 0.005	< 0.005	—	12.6
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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.26	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	265	265	0.01	0.01	0.03	268
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.44	9.44	< 0.005	< 0.005	0.02	9.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	1.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Paving (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	1.06	9.73	12.8	0.02	0.46	—	0.46	0.42	—	0.42	—	2,160	2,160	0.09	0.02	—	2,168
Paving	—	2.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.72	0.95	< 0.005	0.03	—	0.03	0.03	—	0.03	—	161	161	0.01	< 0.005	—	161
Paving	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.6	26.6	< 0.005	< 0.005	—	26.7

Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.5	19.5	< 0.005	< 0.005	0.03	19.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.23	3.23	< 0.005	< 0.005	0.01	3.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Paving (2025) - Mitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	1.06	9.73	12.8	0.02	0.46	—	0.46	0.42	—	0.42	—	2,160	2,160	0.09	0.02	—	2,168
Paving	—	2.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.72	0.95	< 0.005	0.03	—	0.03	0.03	—	0.03	—	161	161	0.01	< 0.005	—	161
Paving	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.6	26.6	< 0.005	< 0.005	—	26.7
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.5	19.5	< 0.005	< 0.005	0.03	19.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.23	3.23	< 0.005	< 0.005	0.01	3.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	2.35	3.04	< 0.005	0.07	—	0.07	0.07	—	0.07	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	2.35	3.04	< 0.005	0.07	—	0.07	0.07	—	0.07	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.21	1.56	< 0.005	0.04	—	0.04	0.03	—	0.03	—	183	183	0.01	< 0.005	—	183
Architectural Coatings	—	7.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.22	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.2	30.2	< 0.005	< 0.005	—	30.3
Architectural Coatings	—	1.32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.85	0.71	0.69	12.2	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	2,221	2,221	0.09	0.08	8.16	2,255
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.75	0.66	0.76	9.20	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	2,042	2,042	0.10	0.08	0.21	2,068
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.42	4.98	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,060	1,060	0.05	0.04	1.81	1,075

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.91	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	176	176	0.01	0.01	0.30	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Architectural Coating (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	2.35	3.04	< 0.005	0.07	—	0.07	0.07	—	0.07	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	2.35	3.04	< 0.005	0.07	—	0.07	0.07	—	0.07	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.21	1.56	< 0.005	0.04	—	0.04	0.03	—	0.03	—	183	183	0.01	< 0.005	—	183
Architectural Coatings	—	7.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.22	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.2	30.2	< 0.005	< 0.005	—	30.3
Architectural Coatings	—	1.32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.85	0.71	0.69	12.2	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	2,221	2,221	0.09	0.08	8.16	2,255
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.75	0.66	0.76	9.20	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	2,042	2,042	0.10	0.08	0.21	2,068
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.42	4.98	0.00	0.00	1.04	1.04	0.00	0.24	0.24	—	1,060	1,060	0.05	0.04	1.81	1,075

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.91	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	176	176	0.01	0.01	0.30	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	2.28	3.02	< 0.005	0.06	—	0.06	0.06	—	0.06	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	2.28	3.02	< 0.005	0.06	—	0.06	0.06	—	0.06	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	1.63	2.16	< 0.005	0.04	—	0.04	0.04	—	0.04	—	254	254	0.01	< 0.005	—	255
Architectural Coatings	—	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.30	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.1	42.1	< 0.005	< 0.005	—	42.2
Architectural Coatings	—	1.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	0.67	0.62	11.3	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	2,174	2,174	0.09	0.07	7.36	2,206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.63	0.69	8.58	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	1,999	1,999	0.03	0.08	0.19	2,023
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.45	0.54	6.41	0.00	0.00	1.45	1.45	0.00	0.34	0.34	—	1,446	1,446	0.02	0.06	2.27	1,465

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.17	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	239	239	< 0.005	0.01	0.38	243
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.22. Architectural Coating (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	2.28	3.02	< 0.005	0.06	—	0.06	0.06	—	0.06	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	2.28	3.02	< 0.005	0.06	—	0.06	0.06	—	0.06	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	1.63	2.16	< 0.005	0.04	—	0.04	0.04	—	0.04	—	254	254	0.01	< 0.005	—	255
Architectural Coatings	—	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.30	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.1	42.1	< 0.005	< 0.005	—	42.2
Architectural Coatings	—	1.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	0.67	0.62	11.3	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	2,174	2,174	0.09	0.07	7.36	2,206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.63	0.69	8.58	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	1,999	1,999	0.03	0.08	0.19	2,023
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.45	0.54	6.41	0.00	0.00	1.45	1.45	0.00	0.34	0.34	—	1,446	1,446	0.02	0.06	2.27	1,465

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.17	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	239	239	< 0.005	0.01	0.38	243
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.30	2.22	3.00	< 0.005	0.05	—	0.05	0.05	—	0.05	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.30	2.22	3.00	< 0.005	0.05	—	0.05	0.05	—	0.05	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.58	2.14	< 0.005	0.04	—	0.04	0.03	—	0.03	—	254	254	0.01	< 0.005	—	255
Architectural Coatings	—	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.29	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.1	42.1	< 0.005	< 0.005	—	42.2
Architectural Coatings	—	1.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.63	0.55	10.5	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	2,133	2,133	0.02	0.07	6.63	2,163
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.60	0.62	7.91	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	1,962	1,962	0.03	0.07	0.17	1,985
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.48	0.43	0.49	5.93	0.00	0.00	1.45	1.45	0.00	0.34	0.34	—	1,419	1,419	0.02	0.05	2.04	1,438

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.08	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	235	235	< 0.005	0.01	0.34	238
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.24. Architectural Coating (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.30	2.22	3.00	< 0.005	0.05	—	0.05	0.05	—	0.05	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.30	2.22	3.00	< 0.005	0.05	—	0.05	0.05	—	0.05	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	14.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.58	2.14	< 0.005	0.04	—	0.04	0.03	—	0.03	—	254	254	0.01	< 0.005	—	255
Architectural Coatings	—	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.29	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.1	42.1	< 0.005	< 0.005	—	42.2
Architectural Coatings	—	1.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.63	0.55	10.5	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	2,133	2,133	0.02	0.07	6.63	2,163
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.60	0.62	7.91	0.00	0.00	2.06	2.06	0.00	0.48	0.48	—	1,962	1,962	0.03	0.07	0.17	1,985
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.48	0.43	0.49	5.93	0.00	0.00	1.45	1.45	0.00	0.34	0.34	—	1,419	1,419	0.02	0.05	2.04	1,438

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.08	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	235	235	< 0.005	0.01	0.34	238
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Low Rise	21.5	19.0	24.8	243	0.67	0.47	23.5	24.0	0.44	4.17	4.61	—	68,470	68,470	2.15	2.76	218	69,564
Condo/Townhouse	18.4	16.3	21.3	208	0.57	0.40	20.1	20.5	0.38	3.57	3.95	—	58,640	58,640	1.84	2.36	187	59,577
Single Family Housing	9.25	8.18	10.7	104	0.29	0.20	10.1	10.3	0.19	1.80	1.99	—	29,497	29,497	0.93	1.19	94.1	29,969

Total	49.1	43.4	56.8	555	1.53	1.07	53.8	54.9	1.00	9.54	10.5	—	156,607	156,607	4.92	6.31	500	159,110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Low Rise	20.4	17.9	26.6	198	0.63	0.47	23.5	24.0	0.44	4.17	4.61	—	64,274	64,274	2.19	2.85	5.66	65,183
Condo/Townhouse	17.5	15.4	22.8	169	0.54	0.40	20.1	20.5	0.38	3.57	3.95	—	55,046	55,046	1.87	2.44	4.85	55,825
Single Family Housing	8.79	7.73	11.5	85.1	0.27	0.20	10.1	10.3	0.19	1.80	1.99	—	27,690	27,690	0.94	1.23	2.44	28,081
Total	46.7	41.0	60.9	452	1.44	1.07	53.8	54.9	1.00	9.54	10.5	—	147,011	147,011	5.00	6.51	13.0	149,089
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Low Rise	3.31	2.90	4.43	33.4	0.10	0.08	3.83	3.91	0.07	0.68	0.75	—	9,587	9,587	0.32	0.42	13.9	9,736
Condo/Townhouse	2.69	2.36	3.60	27.2	0.08	0.06	3.11	3.18	0.06	0.55	0.61	—	7,791	7,791	0.26	0.35	11.3	7,912
Single Family Housing	1.57	1.38	2.10	15.8	0.05	0.04	1.81	1.85	0.03	0.32	0.36	—	4,540	4,540	0.15	0.20	6.60	4,611
Total	7.56	6.64	10.1	76.5	0.24	0.17	8.76	8.93	0.16	1.55	1.72	—	21,919	21,919	0.74	0.97	31.9	22,259

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Low Rise	21.5	19.0	24.8	243	0.67	0.47	23.5	24.0	0.44	4.17	4.61	—	68,470	68,470	2.15	2.76	218	69,564
Condo/Townhouse	18.4	16.3	21.3	208	0.57	0.40	20.1	20.5	0.38	3.57	3.95	—	58,640	58,640	1.84	2.36	187	59,577
Single Family Housing	9.25	8.18	10.7	104	0.29	0.20	10.1	10.3	0.19	1.80	1.99	—	29,497	29,497	0.93	1.19	94.1	29,969
Total	49.1	43.4	56.8	555	1.53	1.07	53.8	54.9	1.00	9.54	10.5	—	156,607	156,607	4.92	6.31	500	159,110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Low Rise	20.4	17.9	26.6	198	0.63	0.47	23.5	24.0	0.44	4.17	4.61	—	64,274	64,274	2.19	2.85	5.66	65,183

Condo/Townhous	17.5	15.4	22.8	169	0.54	0.40	20.1	20.5	0.38	3.57	3.95	—	55,046	55,046	1.87	2.44	4.85	55,825
Single Family Housing	8.79	7.73	11.5	85.1	0.27	0.20	10.1	10.3	0.19	1.80	1.99	—	27,690	27,690	0.94	1.23	2.44	28,081
Total	46.7	41.0	60.9	452	1.44	1.07	53.8	54.9	1.00	9.54	10.5	—	147,011	147,011	5.00	6.51	13.0	149,089
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Low Rise	3.31	2.90	4.43	33.4	0.10	0.08	3.83	3.91	0.07	0.68	0.75	—	9,587	9,587	0.32	0.42	13.9	9,736
Condo/Townhouse	2.69	2.36	3.60	27.2	0.08	0.06	3.11	3.18	0.06	0.55	0.61	—	7,791	7,791	0.26	0.35	11.3	7,912
Single Family Housing	1.57	1.38	2.10	15.8	0.05	0.04	1.81	1.85	0.03	0.32	0.36	—	4,540	4,540	0.15	0.20	6.60	4,611
Total	7.56	6.64	10.1	76.5	0.24	0.17	8.76	8.93	0.16	1.55	1.72	—	21,919	21,919	0.74	0.97	31.9	22,259

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,203	1,203	0.11	0.01	—	1,210
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,922	3,922	0.37	0.05	—	3,945
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	2,767	2,767	0.26	0.03	—	2,783
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,639	1,639	0.16	0.02	—	1,648
Total	—	—	—	—	—	—	—	—	—	—	—	—	9,531	9,531	0.91	0.11	—	9,587
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,203	1,203	0.11	0.01	—	1,210
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,922	3,922	0.37	0.05	—	3,945
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	2,767	2,767	0.26	0.03	—	2,783
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,639	1,639	0.16	0.02	—	1,648
Total	—	—	—	—	—	—	—	—	—	—	—	—	9,531	9,531	0.91	0.11	—	9,587
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	199	199	0.02	< 0.005	—	200
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	649	649	0.06	0.01	—	653
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	458	458	0.04	0.01	—	461
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	271	271	0.03	< 0.005	—	273
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,578	1,578	0.15	0.02	—	1,587

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,203	1,203	0.11	0.01	—	1,210
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,922	3,922	0.37	0.05	—	3,945
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	2,767	2,767	0.26	0.03	—	2,783

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,639	1,639	0.16	0.02	—	1,648
Total	—	—	—	—	—	—	—	—	—	—	—	—	9,531	9,531	0.91	0.11	—	9,587
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,203	1,203	0.11	0.01	—	1,210
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,922	3,922	0.37	0.05	—	3,945
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	2,767	2,767	0.26	0.03	—	2,783
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,639	1,639	0.16	0.02	—	1,648
Total	—	—	—	—	—	—	—	—	—	—	—	—	9,531	9,531	0.91	0.11	—	9,587
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	199	199	0.02	< 0.005	—	200
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	649	649	0.06	0.01	—	653
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	458	458	0.04	0.01	—	461

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	271	271	0.03	< 0.005	—	273
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,578	1,578	0.15	0.02	—	1,587

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
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
Apartments Low Rise	0.30	0.15	2.59	1.10	0.02	0.21	—	0.21	0.21	—	0.21	—	3,285	3,285	0.29	0.01	—	3,294
Condo/Townhouse	0.25	0.12	2.10	0.89	0.01	0.17	—	0.17	0.17	—	0.17	—	2,660	2,660	0.24	0.01	—	2,667
Single Family Housing	0.19	0.10	1.66	0.71	0.01	0.13	—	0.13	0.13	—	0.13	—	2,109	2,109	0.19	< 0.005	—	2,114
Total	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	8,053	8,053	0.71	0.02	—	8,075
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

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
Apartments Low Rise	0.30	0.15	2.59	1.10	0.02	0.21	—	0.21	0.21	—	0.21	—	3,285	3,285	0.29	0.01	—	3,294
Condo/Townhouse	0.25	0.12	2.10	0.89	0.01	0.17	—	0.17	0.17	—	0.17	—	2,660	2,660	0.24	0.01	—	2,667
Single Family Housing	0.19	0.10	1.66	0.71	0.01	0.13	—	0.13	0.13	—	0.13	—	2,109	2,109	0.19	< 0.005	—	2,114
Total	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	8,053	8,053	0.71	0.02	—	8,075
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
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
Apartments Low Rise	0.06	0.03	0.47	0.20	< 0.005	0.04	—	0.04	0.04	—	0.04	—	544	544	0.05	< 0.005	—	545
Condo/Townhouse	0.04	0.02	0.38	0.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	440	440	0.04	< 0.005	—	442
Single Family Housing	0.04	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	349	349	0.03	< 0.005	—	350
Total	0.14	0.07	1.16	0.49	0.01	0.09	—	0.09	0.09	—	0.09	—	1,333	1,333	0.12	< 0.005	—	1,337

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
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
Apartments Low Rise	0.30	0.15	2.59	1.10	0.02	0.21	—	0.21	0.21	—	0.21	—	3,285	3,285	0.29	0.01	—	3,294
Condo/Townhouse	0.25	0.12	2.10	0.89	0.01	0.17	—	0.17	0.17	—	0.17	—	2,660	2,660	0.24	0.01	—	2,667
Single Family Housing	0.19	0.10	1.66	0.71	0.01	0.13	—	0.13	0.13	—	0.13	—	2,109	2,109	0.19	< 0.005	—	2,114
Total	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	8,053	8,053	0.71	0.02	—	8,075
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
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
Apartments Low Rise	0.30	0.15	2.59	1.10	0.02	0.21	—	0.21	0.21	—	0.21	—	3,285	3,285	0.29	0.01	—	3,294
Condo/Townhouse	0.25	0.12	2.10	0.89	0.01	0.17	—	0.17	0.17	—	0.17	—	2,660	2,660	0.24	0.01	—	2,667
Single Family Housing	0.19	0.10	1.66	0.71	0.01	0.13	—	0.13	0.13	—	0.13	—	2,109	2,109	0.19	< 0.005	—	2,114
Total	0.74	0.37	6.34	2.70	0.04	0.51	—	0.51	0.51	—	0.51	—	8,053	8,053	0.71	0.02	—	8,075

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
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
Apartments Low Rise	0.06	0.03	0.47	0.20	< 0.005	0.04	—	0.04	0.04	—	0.04	—	544	544	0.05	< 0.005	—	545
Condo/Townhouse	0.04	0.02	0.38	0.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	440	440	0.04	< 0.005	—	442
Single Family Housing	0.04	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	349	349	0.03	< 0.005	—	350
Total	0.14	0.07	1.16	0.49	0.01	0.09	—	0.09	0.09	—	0.09	—	1,333	1,333	0.12	< 0.005	—	1,337

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.13	0.57	9.67	4.12	0.06	0.78	—	0.78	0.78	—	0.78	0.00	12,276	12,276	0.23	0.02	—	12,288
Consumer Products	—	29.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	6.24	5.91	0.64	67.4	< 0.005	0.02	—	0.02	0.03	—	0.03	—	180	180	0.01	< 0.005	—	181
Total	7.37	38.3	10.3	71.5	0.06	0.81	—	0.81	0.81	—	0.81	0.00	12,456	12,456	0.24	0.02	—	12,469
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.13	0.57	9.67	4.12	0.06	0.78	—	0.78	0.78	—	0.78	0.00	12,276	12,276	0.23	0.02	—	12,288
Consumer Products	—	29.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.13	32.4	9.67	4.12	0.06	0.78	—	0.78	0.78	—	0.78	0.00	12,276	12,276	0.23	0.02	—	12,288
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	0.01	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	139	139	< 0.005	< 0.005	—	139
Consumer Products	—	5.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.78	0.74	0.08	8.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.4	20.4	< 0.005	< 0.005	—	20.5
Total	0.79	6.55	0.20	8.48	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	160	160	< 0.005	< 0.005	—	160

4.3.1. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.13	0.57	9.67	4.12	0.06	0.78	—	0.78	0.78	—	0.78	0.00	12,276	12,276	0.23	0.02	—	12,288
Consumer Products	—	29.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	6.24	5.91	0.64	67.4	< 0.005	0.02	—	0.02	0.03	—	0.03	—	180	180	0.01	< 0.005	—	181
Total	7.37	38.3	10.3	71.5	0.06	0.81	—	0.81	0.81	—	0.81	0.00	12,456	12,456	0.24	0.02	—	12,469
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.13	0.57	9.67	4.12	0.06	0.78	—	0.78	0.78	—	0.78	0.00	12,276	12,276	0.23	0.02	—	12,288
Consumer Products	—	29.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.13	32.4	9.67	4.12	0.06	0.78	—	0.78	0.78	—	0.78	0.00	12,276	12,276	0.23	0.02	—	12,288
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	0.01	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	139	139	< 0.005	< 0.005	—	139
Consumer Products	—	5.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	0.78	0.74	0.08	8.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.4	20.4	< 0.005	< 0.005	—	20.5
Total	0.79	6.55	0.20	8.48	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	160	160	< 0.005	< 0.005	—	160

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	51.4	206	258	5.29	0.13	—	428
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	47.7	199	247	4.91	0.12	—	405
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	44.9	181	226	4.62	0.11	—	374
Total	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	51.4	206	258	5.29	0.13	—	428
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	47.7	199	247	4.91	0.12	—	405
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	44.9	181	226	4.62	0.11	—	374
Total	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	8.51	34.2	42.7	0.88	0.02	—	70.9
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	7.90	33.0	40.9	0.81	0.02	—	67.1
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7.43	29.9	37.3	0.76	0.02	—	61.9
Total	—	—	—	—	—	—	—	—	—	—	—	23.8	97.1	121	2.45	0.06	—	200

4.4.1. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	51.4	206	258	5.29	0.13	—	428
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	47.7	199	247	4.91	0.12	—	405
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	44.9	181	226	4.62	0.11	—	374
Total	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	51.4	206	258	5.29	0.13	—	428
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	47.7	199	247	4.91	0.12	—	405
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	44.9	181	226	4.62	0.11	—	374
Total	—	—	—	—	—	—	—	—	—	—	—	144	586	730	14.8	0.36	—	1,207

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	8.51	34.2	42.7	0.88	0.02	—	70.9
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	7.90	33.0	40.9	0.81	0.02	—	67.1
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7.43	29.9	37.3	0.76	0.02	—	61.9
Total	—	—	—	—	—	—	—	—	—	—	—	23.8	97.1	121	2.45	0.06	—	200

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	241	0.00	241	24.1	0.00	—	842

Condo/T	—	—	—	—	—	—	—	—	—	—	—	159	0.00	159	15.9	0.00	—	555
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	91.4	0.00	91.4	9.13	0.00	—	320
Total	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	241	0.00	241	24.1	0.00	—	842
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	159	0.00	159	15.9	0.00	—	555
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	91.4	0.00	91.4	9.13	0.00	—	320
Total	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	39.9	0.00	39.9	3.98	0.00	—	139
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	26.3	0.00	26.3	2.63	0.00	—	91.9

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	15.1	0.00	15.1	1.51	0.00	—	52.9
Total	—	—	—	—	—	—	—	—	—	—	—	81.2	0.00	81.2	8.12	0.00	—	284

4.5.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	241	0.00	241	24.1	0.00	—	842
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	159	0.00	159	15.9	0.00	—	555
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	91.4	0.00	91.4	9.13	0.00	—	320
Total	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	241	0.00	241	24.1	0.00	—	842
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	159	0.00	159	15.9	0.00	—	555
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	91.4	0.00	91.4	9.13	0.00	—	320
Total	—	—	—	—	—	—	—	—	—	—	—	491	0.00	491	49.0	0.00	—	1,717
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	39.9	0.00	39.9	3.98	0.00	—	139
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	26.3	0.00	26.3	2.63	0.00	—	91.9
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	15.1	0.00	15.1	1.51	0.00	—	52.9
Total	—	—	—	—	—	—	—	—	—	—	—	81.2	0.00	81.2	8.12	0.00	—	284

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.33	4.33
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.85	2.85
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.38	2.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.33	4.33
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.85	2.85
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.38	2.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.72	0.72
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.47	0.47

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.39	0.39
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.58	1.58

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.33	4.33
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.85	2.85
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.38	2.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.33	4.33
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.85	2.85
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.38	2.38

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.56	9.56
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.72	0.72
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.47	0.47
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.39	0.39
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.58	1.58

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.8.2. Mitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	6/1/2024	6/28/2024	5.00	20.0	—
Site Preparation	Site Preparation	6/29/2024	7/26/2024	5.00	20.0	—
Grading	Grading	7/27/2024	12/13/2024	5.00	100	—
Building Construction	Building Construction	12/14/2024	12/31/2027	5.00	795	—
Paving	Paving	12/14/2024	2/07/2025	5.00	40.0	—
Architectural Coating	Architectural Coating	4/14/2025	12/31/2027	5.00	710	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

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

Grading	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	12.0	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	3.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Grading	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Demolition	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Site Preparation	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Grading	Off-Highway Trucks	Diesel	Average	2.00	2.00	376	0.38
Paving	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38

5.2.2. Mitigated

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

Grading	Graders	Diesel	Tier 4 Final	2.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	11.0	8.00	423	0.48
Grading	Scrapers	Diesel	Tier 4 Interim	1.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	3.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Grading	Crawler Tractors	Diesel	Tier 4 Final	3.00	8.00	87.0	0.43
Demolition	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Site Preparation	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Grading	Off-Highway Trucks	Diesel	Average	2.00	2.00	376	0.38
Paving	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	20.0	18.5	LDA,LDT1,LDT2

Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	18.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	20.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	55.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	788	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	127	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	158	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	20.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	18.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	20.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	55.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	788	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	127	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT

Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	158	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	2,703,375	901,125	0.00	0.00	365,616

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	32,930	—
Site Preparation	—	—	30.0	0.00	—
Grading	—	—	1,550	0.00	—
Paving	0.00	0.00	0.00	0.00	142

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	107	0%
Parking Lot	33.2	100%
Apartments Low Rise	—	0%
Condo/Townhouse	—	0%
Single Family Housing	2.04	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005
2026	0.00	346	0.03	< 0.005
2027	0.00	346	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

Other Non-Asphalt Surfaces	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
Apartments Low Rise	4,071	2,748	2,331	1,326,224	84,735	57,202	48,528	27,604,732
Condo/Townhouse	2,866	3,486	2,854	1,077,696	59,646	72,569	59,398	22,431,729
Single Family Housing	1,745	1,754	1,569	628,079	36,312	36,505	32,654	13,073,166

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Other Non-Asphalt Surfaces	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
Apartments Low Rise	4,071	2,748	2,331	1,326,224	84,735	57,202	48,528	27,604,732
Condo/Townhouse	2,866	3,486	2,854	1,077,696	59,646	72,569	59,398	22,431,729
Single Family Housing	1,745	1,754	1,569	628,079	36,312	36,505	32,654	13,073,166

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0

Electric Fireplaces	0
No Fireplaces	604
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	398
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	185
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	604
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	398
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	185
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	0
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)
2703375	901,125	0.00	0.00	365,616

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

Parking Lot	1,268,772	346	0.0330	0.0040	0.00
Apartments Low Rise	4,135,461	346	0.0330	0.0040	10,250,015
Condo/Townhouse	2,916,998	346	0.0330	0.0040	8,298,569
Single Family Housing	1,727,760	346	0.0330	0.0040	6,579,398

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
Parking Lot	1,268,772	346	0.0330	0.0040	0.00
Apartments Low Rise	4,135,461	346	0.0330	0.0040	10,250,015
Condo/Townhouse	2,916,998	346	0.0330	0.0040	8,298,569
Single Family Housing	1,727,760	346	0.0330	0.0040	6,579,398

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Non-Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00
Apartments Low Rise	26,829,325	6,597,375
Condo/Townhouse	24,898,840	7,632,697
Single Family Housing	23,415,480	5,853,870

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Non-Asphalt Surfaces	0.00	0.00

Parking Lot	0.00	0.00
Apartments Low Rise	26,829,325	6,597,375
Condo/Townhouse	24,898,840	7,632,697
Single Family Housing	23,415,480	5,853,870

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Non-Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00
Apartments Low Rise	446.65	0.00
Condo/Townhouse	294.41	0.00
Single Family Housing	169.51	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Non-Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00
Apartments Low Rise	446.65	0.00
Condo/Townhouse	294.41	0.00
Single Family Housing	169.51	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 Low 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 Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low 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 Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.3	annual days of extreme heat

Extreme Precipitation	2.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	88.8
AQ-PM	95.3
AQ-DPM	90.8
Drinking Water	97.1
Lead Risk Housing	13.3
Pesticides	71.3

Toxic Releases	73.2
Traffic	80.7
Effect Indicators	—
CleanUp Sites	42.6
Groundwater	26.4
Haz Waste Facilities/Generators	86.6
Impaired Water Bodies	43.8
Solid Waste	37.6
Sensitive Population	—
Asthma	20.1
Cardio-vascular	53.7
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	56.5
Housing	38.8
Linguistic	41.4
Poverty	51.4
Unemployment	73.4

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	72.92441935
Employed	55.33170794
Median HI	79.96920313
Education	—

Bachelor's or higher	45.02758886
High school enrollment	100
Preschool enrollment	29.03888105
Transportation	—
Auto Access	61.56807391
Active commuting	9.110740408
Social	—
2-parent households	57.34633646
Voting	22.89233928
Neighborhood	—
Alcohol availability	79.8665469
Park access	4.401385859
Retail density	31.29731811
Supermarket access	44.06518671
Tree canopy	8.879763891
Housing	—
Homeownership	57.84678558
Housing habitability	81.6501989
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	73.73283716
Uncrowded housing	66.03361992
Health Outcomes	—
Insured adults	60.86231233
Arthritis	0.0
Asthma ER Admissions	74.4
High Blood Pressure	0.0
Cancer (excluding skin)	0.0

Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	28.1
Cognitively Disabled	43.0
Physically Disabled	65.4
Heart Attack ER Admissions	38.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	55.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	39.2
Elderly	79.3
English Speaking	52.2
Foreign-born	54.0
Outdoor Workers	26.0
Climate Change Adaptive Capacity	—

Impervious Surface Cover	42.1
Traffic Density	79.9
Traffic Access	23.0
Other Indices	—
Hardship	52.9
Other Decision Support	—
2016 Voting	50.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	74.0
Healthy Places Index Score for Project Location (b)	53.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Land Use	Per VRSP and TTM. Entire TTM acreage mass graded in Phase 1 and offsite road improvements to Pat's Ranch Rd.
Construction: Construction Phases	Per Applicant
Construction: Off-Road Equipment	Per Applicant, Equipment runs 8hrs/day
Operations: Hearths	No Fireplaces for Apartments. Assume all single family homes and condo/townhomes have gas fireplaces
Operations: Vehicle Data	Weekday trips rates per Traffic Study; Weekend trips per ITE
Operations: Water and Waste Water	Per WSA

Vernola Ranch SP - Phase 2 Detailed Report

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3.3. Building Construction (2028) - Unmitigated

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3.9. Architectural Coating (2028) - Unmitigated

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4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.2. Unmitigated

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Vernola Ranch SP - Phase 2
Construction Start Date	1/1/2028
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	18.8
Location	33.982995736247204, -117.54622676091887
County	Riverside-South Coast
City	Jurupa Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5440
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.10

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	174	Dwelling Unit	22.4	313,200	2,038,037	—	562	—
Condo/Townhouse	215	Dwelling Unit	8.36	215,000	—	—	694	—
Other Non-Asphalt Surfaces	0.86	Acre	0.86	0.00	—	—	—	—
Parking Lot	22.1	Acre	22.1	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.52	14.4	26.8	51.7	0.07	0.79	3.77	4.56	0.73	0.90	1.63	—	10,850	10,850	0.31	0.36	12.7	10,977
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.63	14.3	38.8	54.9	0.10	1.58	4.73	6.31	1.46	1.94	3.40	—	12,078	12,078	0.43	0.36	0.33	12,195
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.19	7.71	20.3	33.9	0.05	0.64	2.66	3.30	0.59	0.70	1.29	—	7,595	7,595	0.24	0.23	3.40	7,674
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.58	1.41	3.71	6.19	0.01	0.12	0.49	0.60	0.11	0.13	0.24	—	1,257	1,257	0.04	0.04	0.56	1,271

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	4.52	14.4	26.8	51.7	0.07	0.79	3.77	4.56	0.73	0.90	1.63	—	10,850	10,850	0.31	0.36	12.7	10,977
2029	4.27	14.2	25.8	50.5	0.07	0.72	3.77	4.49	0.67	0.90	1.56	—	10,756	10,756	0.30	0.35	11.3	10,879
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	5.63	14.3	38.8	54.9	0.10	1.58	4.73	6.31	1.46	1.94	3.40	—	12,078	12,078	0.43	0.36	0.33	12,195
2029	4.22	14.1	26.0	46.8	0.07	0.72	3.77	4.49	0.67	0.90	1.56	—	10,485	10,485	0.31	0.35	0.29	10,597
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	3.19	7.71	20.3	33.9	0.05	0.64	2.66	3.30	0.59	0.70	1.29	—	7,595	7,595	0.24	0.23	3.40	7,674
2029	2.01	6.69	12.4	22.6	0.03	0.34	1.77	2.11	0.32	0.42	0.74	—	5,005	5,005	0.15	0.17	2.32	5,060
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.58	1.41	3.71	6.19	0.01	0.12	0.49	0.60	0.11	0.13	0.24	—	1,257	1,257	0.04	0.04	0.56	1,271
2029	0.37	1.22	2.26	4.12	0.01	0.06	0.32	0.39	0.06	0.08	0.13	—	829	829	0.02	0.03	0.38	838

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.8	30.1	36.2	222	0.67	1.76	20.4	22.2	1.75	3.61	5.36	244	83,113	83,357	28.1	2.52	153	84,964

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.0	27.4	37.4	164	0.63	1.76	20.4	22.1	1.74	3.61	5.35	244	79,554	79,798	28.1	2.59	7.66	81,281
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.2	27.0	30.0	168	0.55	1.24	18.5	19.8	1.23	3.29	4.51	244	67,582	67,826	27.8	2.39	62.5	69,295
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.14	4.93	5.48	30.7	0.10	0.23	3.38	3.61	0.22	0.60	0.82	40.4	11,189	11,229	4.60	0.40	10.3	11,473

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.8	14.8	18.8	192	0.56	0.36	20.4	20.8	0.34	3.61	3.95	—	57,051	57,051	1.74	2.26	149	57,917
Area	2.78	14.7	6.66	24.9	0.04	0.53	—	0.53	0.53	—	0.53	0.00	8,250	8,250	0.16	0.02	—	8,258
Energy	1.26	0.63	10.8	4.59	0.07	0.87	—	0.87	0.87	—	0.87	—	17,515	17,515	1.58	0.07	—	17,575
Water	—	—	—	—	—	—	—	—	—	—	—	72.6	296	369	7.47	0.18	—	609
Waste	—	—	—	—	—	—	—	—	—	—	—	171	0.00	171	17.1	0.00	—	600
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.78	3.78
Total	20.8	30.1	36.2	222	0.67	1.76	20.4	22.2	1.75	3.61	5.36	244	83,113	83,357	28.1	2.52	153	84,964
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.0	14.0	20.1	157	0.52	0.36	20.4	20.8	0.34	3.61	3.95	—	53,552	53,552	1.77	2.33	3.87	54,293
Area	0.76	12.7	6.45	2.75	0.04	0.52	—	0.52	0.52	—	0.52	0.00	8,191	8,191	0.15	0.02	—	8,199

Energy	1.26	0.63	10.8	4.59	0.07	0.87	—	0.87	0.87	—	0.87	—	17,515	17,515	1.58	0.07	—	17,575
Water	—	—	—	—	—	—	—	—	—	—	—	72.6	296	369	7.47	0.18	—	609
Waste	—	—	—	—	—	—	—	—	—	—	—	171	0.00	171	17.1	0.00	—	600
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.78	3.78
Total	18.0	27.4	37.4	164	0.63	1.76	20.4	22.1	1.74	3.61	5.35	244	79,554	79,798	28.1	2.59	7.66	81,281
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.5	12.7	18.7	148	0.48	0.33	18.5	18.9	0.31	3.29	3.60	—	49,169	49,169	1.61	2.14	58.7	49,905
Area	1.44	13.7	0.58	15.3	< 0.005	0.04	—	0.04	0.04	—	0.04	0.00	601	601	0.01	< 0.005	—	602
Energy	1.26	0.63	10.8	4.59	0.07	0.87	—	0.87	0.87	—	0.87	—	17,515	17,515	1.58	0.07	—	17,575
Water	—	—	—	—	—	—	—	—	—	—	—	72.6	296	369	7.47	0.18	—	609
Waste	—	—	—	—	—	—	—	—	—	—	—	171	0.00	171	17.1	0.00	—	600
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.78	3.78
Total	17.2	27.0	30.0	168	0.55	1.24	18.5	19.8	1.23	3.29	4.51	244	67,582	67,826	27.8	2.39	62.5	69,295
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.64	2.31	3.41	27.0	0.09	0.06	3.38	3.45	0.06	0.60	0.66	—	8,140	8,140	0.27	0.35	9.72	8,262
Area	0.26	2.50	0.11	2.80	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	99.6	99.6	< 0.005	< 0.005	—	99.7
Energy	0.23	0.12	1.97	0.84	0.01	0.16	—	0.16	0.16	—	0.16	—	2,900	2,900	0.26	0.01	—	2,910
Water	—	—	—	—	—	—	—	—	—	—	—	12.0	49.1	61.1	1.24	0.03	—	101
Waste	—	—	—	—	—	—	—	—	—	—	—	28.4	0.00	28.4	2.84	0.00	—	99.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.63	0.63
Total	3.14	4.93	5.48	30.7	0.10	0.23	3.38	3.61	0.22	0.60	0.82	40.4	11,189	11,229	4.60	0.40	10.3	11,473

3. Construction Emissions Details

3.1. Grading (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.53	4.65	38.7	40.9	0.10	1.58	—	1.58	1.46	—	1.46	—	10,538	10,538	0.43	0.09	—	10,574
Dust From Material Movement	—	—	—	—	—	—	4.37	4.37	—	1.86	1.86	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.38	3.18	3.36	0.01	0.13	—	0.13	0.12	—	0.12	—	866	866	0.04	0.01	—	869
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.58	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	143	143	0.01	< 0.005	—	144
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.11	1.29	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	336	336	< 0.005	0.01	0.03	340
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.04	28.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.63	4.63	< 0.005	< 0.005	0.01	4.69
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	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Building Construction (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.98	2.50	22.5	32.1	0.06	0.73	—	0.73	0.67	—	0.67	—	5,827	5,827	0.24	0.05	—	5,847

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.98	2.50	22.5	32.1	0.06	0.73	—	0.73	0.67	—	0.67	—	5,827	5,827	0.24	0.05	—	5,847
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.89	1.58	14.3	20.4	0.04	0.46	—	0.46	0.43	—	0.43	—	3,695	3,695	0.15	0.03	—	3,707
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.61	3.72	0.01	0.08	—	0.08	0.08	—	0.08	—	612	612	0.02	< 0.005	—	614
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.95	0.84	0.75	13.5	0.00	0.00	2.84	2.84	0.00	0.67	0.67	—	2,888	2,888	0.03	0.10	8.19	2,928
Vendor	0.06	0.03	1.22	0.39	0.01	0.02	0.36	0.37	0.02	0.10	0.12	—	1,201	1,201	0.02	0.18	2.85	1,259
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.81	0.80	0.85	10.2	0.00	0.00	2.84	2.84	0.00	0.67	0.67	—	2,657	2,657	0.04	0.10	0.21	2,689
Vendor	0.05	0.02	1.28	0.40	0.01	0.02	0.36	0.37	0.02	0.10	0.12	—	1,202	1,202	0.02	0.18	0.07	1,257
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.50	0.54	6.80	0.00	0.00	1.78	1.78	0.00	0.42	0.42	—	1,706	1,706	0.02	0.07	2.24	1,728
Vendor	0.03	0.02	0.82	0.25	0.01	0.01	0.22	0.24	0.01	0.06	0.07	—	762	762	0.01	0.12	0.78	798
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.10	1.24	0.00	0.00	0.32	0.32	0.00	0.08	0.08	—	282	282	< 0.005	0.01	0.37	286
Vendor	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	126	126	< 0.005	0.02	0.13	132
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2029) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	21.8	32.1	0.06	0.67	—	0.67	0.62	—	0.62	—	5,826	5,826	0.24	0.05	—	5,846
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.43	21.8	32.1	0.06	0.67	—	0.67	0.62	—	0.62	—	5,826	5,826	0.24	0.05	—	5,846
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.38	1.16	10.3	15.3	0.03	0.32	—	0.32	0.29	—	0.29	—	2,771	2,771	0.11	0.02	—	2,780
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.89	2.78	< 0.005	0.06	—	0.06	0.05	—	0.05	—	459	459	0.02	< 0.005	—	460
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.82	0.81	0.65	12.6	0.00	0.00	2.84	2.84	0.00	0.67	0.67	—	2,837	2,837	0.03	0.10	7.32	2,876
Vendor	0.06	0.03	1.18	0.38	0.01	0.02	0.36	0.37	0.02	0.10	0.12	—	1,170	1,170	0.02	0.17	2.54	1,225
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.78	0.67	0.75	9.45	0.00	0.00	2.84	2.84	0.00	0.67	0.67	—	2,610	2,610	0.03	0.10	0.19	2,642
Vendor	0.05	0.02	1.23	0.39	0.01	0.02	0.36	0.37	0.02	0.10	0.12	—	1,171	1,171	0.02	0.17	0.07	1,223
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.32	0.36	4.75	0.00	0.00	1.34	1.34	0.00	0.31	0.31	—	1,257	1,257	0.02	0.05	1.50	1,273
Vendor	0.03	0.01	0.59	0.19	< 0.005	0.01	0.17	0.18	0.01	0.05	0.06	—	556	556	0.01	0.08	0.52	582
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.87	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	208	208	< 0.005	0.01	0.25	211
Vendor	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	92.1	92.1	< 0.005	0.01	0.09	96.3
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	0.00	0.00

3.7. Paving (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.91	7.75	11.4	0.02	0.30	—	0.30	0.27	—	0.27	—	2,178	2,178	0.09	0.02	—	2,185
Paving	—	2.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.42	0.62	< 0.005	0.02	—	0.02	0.01	—	0.01	—	119	119	< 0.005	< 0.005	—	120
Paving	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.8	19.8	< 0.005	< 0.005	—	19.8
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.82	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	214	214	< 0.005	0.01	0.02	216
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.02	12.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.96	1.96	< 0.005	< 0.005	< 0.005	1.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.16	2.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	10.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.16	2.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	10.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	0.98	1.36	< 0.005	0.02	—	0.02	0.02	—	0.02	—	162	162	0.01	< 0.005	—	163
Architectural Coatings	—	4.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.18	0.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.9	26.9	< 0.005	< 0.005	—	27.0
Architectural Coatings	—	0.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.15	2.69	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	578	578	0.01	0.02	1.64	586
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.16	0.17	2.04	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	531	531	0.01	0.02	0.04	538
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.08	0.98	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	245	245	< 0.005	0.01	0.32	249
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	40.6	40.6	< 0.005	< 0.005	0.05	41.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2029) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.27	2.12	2.97	< 0.005	0.03	—	0.03	0.03	—	0.03	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	10.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.27	2.12	2.97	< 0.005	0.03	—	0.03	0.03	—	0.03	—	356	356	0.01	< 0.005	—	357
Architectural Coatings	—	10.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.01	1.41	< 0.005	0.02	—	0.02	0.01	—	0.01	—	169	169	0.01	< 0.005	—	170
Architectural Coatings	—	5.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.18	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.0	28.0	< 0.005	< 0.005	—	28.1
Architectural Coatings	—	0.91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.16	0.13	2.52	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	567	567	0.01	0.02	1.46	575
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.13	0.15	1.89	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	522	522	0.01	0.02	0.04	528
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.95	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	251	251	< 0.005	0.01	0.30	255
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	41.6	41.6	< 0.005	< 0.005	0.05	42.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	7.84	6.91	8.76	89.8	0.26	0.17	9.52	9.69	0.16	1.69	1.85	—	26,637	26,637	0.81	1.05	69.8	27,041

Condo/T	8.95	7.89	10.00	103	0.30	0.19	10.9	11.1	0.18	1.93	2.11	—	30,414	30,414	0.93	1.20	79.7	30,876
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	16.8	14.8	18.8	192	0.56	0.36	20.4	20.8	0.34	3.61	3.95	—	57,051	57,051	1.74	2.26	149	57,917
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	7.48	6.56	9.40	73.2	0.24	0.17	9.52	9.69	0.16	1.69	1.85	—	25,003	25,003	0.83	1.09	1.81	25,349
Condo/Townhouse	8.54	7.49	10.7	83.5	0.28	0.19	10.9	11.1	0.18	1.93	2.11	—	28,548	28,548	0.94	1.24	2.07	28,944
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	16.0	14.0	20.1	157	0.52	0.36	20.4	20.8	0.34	3.61	3.95	—	53,552	53,552	1.77	2.33	3.87	54,293
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.33	1.17	1.72	13.6	0.04	0.03	1.70	1.74	0.03	0.30	0.33	—	4,100	4,100	0.13	0.18	4.89	4,161
Condo/Townhouse	1.31	1.15	1.69	13.4	0.04	0.03	1.68	1.71	0.03	0.30	0.33	—	4,041	4,041	0.13	0.18	4.82	4,101
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.64	2.31	3.41	27.0	0.09	0.06	3.38	3.45	0.06	0.60	0.66	—	8,140	8,140	0.27	0.35	9.72	8,262

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,541	1,541	0.15	0.02	—	1,550
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	1,495	1,495	0.14	0.02	—	1,503
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	799	799	0.08	0.01	—	804
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,835	3,835	0.37	0.04	—	3,858
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,541	1,541	0.15	0.02	—	1,550
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	1,495	1,495	0.14	0.02	—	1,503
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	799	799	0.08	0.01	—	804
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,835	3,835	0.37	0.04	—	3,858
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	255	255	0.02	< 0.005	—	257
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	247	247	0.02	< 0.005	—	249
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	132	132	0.01	< 0.005	—	133
Total	—	—	—	—	—	—	—	—	—	—	—	—	635	635	0.06	0.01	—	639

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.73	0.37	6.25	2.66	0.04	0.51	—	0.51	0.51	—	0.51	—	7,933	7,933	0.70	0.01	—	7,955
Condo/Townhouse	0.53	0.26	4.53	1.93	0.03	0.37	—	0.37	0.37	—	0.37	—	5,747	5,747	0.51	0.01	—	5,763
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	1.26	0.63	10.8	4.59	0.07	0.87	—	0.87	0.87	—	0.87	—	13,680	13,680	1.21	0.03	—	13,718
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.73	0.37	6.25	2.66	0.04	0.51	—	0.51	0.51	—	0.51	—	7,933	7,933	0.70	0.01	—	7,955
Condo/Townhouse	0.53	0.26	4.53	1.93	0.03	0.37	—	0.37	0.37	—	0.37	—	5,747	5,747	0.51	0.01	—	5,763
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	1.26	0.63	10.8	4.59	0.07	0.87	—	0.87	0.87	—	0.87	—	13,680	13,680	1.21	0.03	—	13,718
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.13	0.07	1.14	0.49	0.01	0.09	—	0.09	0.09	—	0.09	—	1,313	1,313	0.12	< 0.005	—	1,317
Condo/Townhouse	0.10	0.05	0.83	0.35	0.01	0.07	—	0.07	0.07	—	0.07	—	951	951	0.08	< 0.005	—	954
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.12	1.97	0.84	0.01	0.16	—	0.16	0.16	—	0.16	—	2,265	2,265	0.20	< 0.005	—	2,271

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.76	0.38	6.45	2.75	0.04	0.52	—	0.52	0.52	—	0.52	0.00	8,191	8,191	0.15	0.02	—	8,199
Consumer Products	—	11.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.02	1.91	0.21	22.1	< 0.005	0.01	—	0.01	0.01	—	0.01	—	59.0	59.0	< 0.005	< 0.005	—	59.2
Total	2.78	14.7	6.66	24.9	0.04	0.53	—	0.53	0.53	—	0.53	0.00	8,250	8,250	0.16	0.02	—	8,258
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.76	0.38	6.45	2.75	0.04	0.52	—	0.52	0.52	—	0.52	0.00	8,191	8,191	0.15	0.02	—	8,199
Consumer Products	—	11.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.76	12.7	6.45	2.75	0.04	0.52	—	0.52	0.52	—	0.52	0.00	8,191	8,191	0.15	0.02	—	8,199
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	92.9	92.9	< 0.005	< 0.005	—	93.0

Consumer Products	—	2.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.25	0.24	0.03	2.77	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.69	6.69	< 0.005	< 0.005	—	6.71
Total	0.26	2.50	0.11	2.80	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	99.6	99.6	< 0.005	< 0.005	—	99.7

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	51.0	206	257	5.25	0.13	—	425
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	21.6	90.8	112	2.22	0.05	—	184
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—	—	—	—	72.6	296	369	7.47	0.18	—	609

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	51.0	206	257	5.25	0.13	—	425
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	21.6	90.8	112	2.22	0.05	—	184
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—	—	—	—	72.6	296	369	7.47	0.18	—	609
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	8.44	34.0	42.5	0.87	0.02	—	70.4
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	3.58	15.0	18.6	0.37	0.01	—	30.5
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—	—	—	—	12.0	49.1	61.1	1.24	0.03	—	101

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	85.9	0.00	85.9	8.58	0.00	—	300
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	85.6	0.00	85.6	8.56	0.00	—	300
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—	—	—	—	171	0.00	171	17.1	0.00	—	600
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	85.9	0.00	85.9	8.58	0.00	—	300
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	85.6	0.00	85.6	8.56	0.00	—	300
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—	—	—	—	171	0.00	171	17.1	0.00	—	600
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	14.2	0.00	14.2	1.42	0.00	—	49.7
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14.2	0.00	14.2	1.42	0.00	—	49.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—	—	—	—	28.4	0.00	28.4	2.84	0.00	—	99.3

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.24	2.24
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.78	3.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.24	2.24
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.78	3.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.63	0.63

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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
Grading	Grading	1/1/2028	2/11/2028	5.00	30.0	—
Building Construction	Building Construction	2/12/2028	8/31/2029	5.00	405	—
Paving	Paving	2/12/2028	3/10/2028	5.00	20.0	—
Architectural Coating	Architectural Coating	5/13/2028	8/31/2029	5.00	340	—

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

Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	3.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	6.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	6.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Building Construction	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Paving	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	27.5	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT

Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	217	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	41.6	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	43.5	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,069,605	356,535	0.00	0.00	59,982

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	—	135	0.00	—
Paving	0.00	0.00	0.00	0.00	24.9

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	1.92	0%
Condo/Townhouse	—	0%
Other Non-Asphalt Surfaces	0.86	0%
Parking Lot	22.1	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2028	0.00	346	0.03	< 0.005
2029	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	1,641	1,650	1,476	590,734	34,153	34,334	30,712	12,295,843
Condo/Townhouse	1,548	1,883	1,542	582,172	32,221	39,202	32,087	12,117,642
Other Non-Asphalt Surfaces	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)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	174
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	215
Propane Fireplaces	0

Electric Fireplaces	0
No Fireplaces	0
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)
1069605	356,535	0.00	0.00	59,982

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	1,625,028	346	0.0330	0.0040	6,188,191
Condo/Townhouse	1,575,765	346	0.0330	0.0040	4,482,895
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
Parking Lot	842,923	346	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)
Single Family Housing	26,602,806	6,708,189
Condo/Townhouse	11,274,120	3,587,220
Other Non-Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	159.31	0.00
Condo/Townhouse	158.88	0.00
Other Non-Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	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
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

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	21.3	annual days of extreme heat
Extreme Precipitation	2.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

Air Quality Degradation	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	88.8
AQ-PM	95.3
AQ-DPM	90.8
Drinking Water	97.1
Lead Risk Housing	13.3
Pesticides	71.3
Toxic Releases	73.2
Traffic	80.7
Effect Indicators	—
CleanUp Sites	42.6
Groundwater	26.4
Haz Waste Facilities/Generators	86.6
Impaired Water Bodies	43.8
Solid Waste	37.6

Sensitive Population	—
Asthma	20.1
Cardio-vascular	53.7
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	56.5
Housing	38.8
Linguistic	41.4
Poverty	51.4
Unemployment	73.4

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	72.92441935
Employed	55.33170794
Median HI	79.96920313
Education	—
Bachelor's or higher	45.02758886
High school enrollment	100
Preschool enrollment	29.03888105
Transportation	—
Auto Access	61.56807391
Active commuting	9.110740408
Social	—
2-parent households	57.34633646

Voting	22.89233928
Neighborhood	—
Alcohol availability	79.8665469
Park access	4.401385859
Retail density	31.29731811
Supermarket access	44.06518671
Tree canopy	8.879763891
Housing	—
Homeownership	57.84678558
Housing habitability	81.6501989
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	73.73283716
Uncrowded housing	66.03361992
Health Outcomes	—
Insured adults	60.86231233
Arthritis	0.0
Asthma ER Admissions	74.4
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	28.1
Cognitively Disabled	43.0
Physically Disabled	65.4
Heart Attack ER Admissions	38.4

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	55.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	39.2
Elderly	79.3
English Speaking	52.2
Foreign-born	54.0
Outdoor Workers	26.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	42.1
Traffic Density	79.9
Traffic Access	23.0
Other Indices	—
Hardship	52.9
Other Decision Support	—
2016 Voting	50.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	74.0
Healthy Places Index Score for Project Location (b)	53.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per VRSP and TTM. Offsite road improvements to Pat's Ranch Rd.
Construction: Construction Phases	Per Applicant
Construction: Off-Road Equipment	Per Applicant, Equipment runs 8hrs/day.
Operations: Vehicle Data	Weekday trip rates per Traffic Study, Weekend trip rates per ITE
Operations: Hearths	Assumed all single family homes and condos have gas fireplaces
Operations: Water and Waste Water	Per WSA

Vernola Ranch SP - Phase 3 Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Vernola Ranch SP - Phase 3
Construction Start Date	1/1/2030
Operational Year	2031
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	18.8
Location	33.982995736247204, -117.54622676091887
County	Riverside-South Coast
City	Jurupa Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5440
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.8

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Elementary School	700	Student	3.14	58,522	—	—	—	—
Parking Lot	2.39	Acre	2.39	0.00	—	—	—	—
Other Non-Asphalt Surfaces	0.51	Acre	0.51	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.68	4.94	12.0	19.2	0.03	0.33	0.47	0.80	0.31	0.11	0.42	—	3,731	3,731	0.13	0.08	1.40	3,760
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.45	4.93	22.3	29.4	0.07	0.91	2.69	3.60	0.84	1.02	1.85	—	7,343	7,343	0.29	0.10	0.05	7,371
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.31	2.81	9.37	14.4	0.03	0.28	0.45	0.73	0.26	0.13	0.39	—	2,916	2,916	0.11	0.06	0.42	2,936
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.51	1.71	2.62	< 0.005	0.05	0.08	0.13	0.05	0.02	0.07	—	483	483	0.02	0.01	0.07	486

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.68	4.94	12.0	19.2	0.03	0.33	0.47	0.80	0.31	0.11	0.42	—	3,731	3,731	0.13	0.08	1.40	3,760
2031	1.63	4.90	11.7	19.0	0.03	0.31	0.47	0.78	0.28	0.11	0.40	—	3,717	3,717	0.13	0.07	1.23	3,741
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	3.45	4.93	22.3	29.4	0.07	0.91	2.69	3.60	0.84	1.02	1.85	—	7,343	7,343	0.29	0.10	0.05	7,371
2031	1.62	4.89	11.7	18.6	0.03	0.31	0.47	0.78	0.28	0.11	0.40	—	3,688	3,688	0.13	0.08	0.03	3,714
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.31	2.81	9.37	14.4	0.03	0.28	0.45	0.73	0.26	0.13	0.39	—	2,916	2,916	0.11	0.06	0.42	2,936
2031	0.67	2.03	4.87	7.75	0.01	0.13	0.19	0.32	0.12	0.05	0.16	—	1,532	1,532	0.06	0.03	0.22	1,543
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.24	0.51	1.71	2.62	< 0.005	0.05	0.08	0.13	0.05	0.02	0.07	—	483	483	0.02	0.01	0.07	486
2031	0.12	0.37	0.89	1.42	< 0.005	0.02	0.03	0.06	0.02	0.01	0.03	—	254	254	0.01	0.01	0.04	255

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.66	7.37	6.82	63.2	0.18	0.20	6.59	6.79	0.19	1.17	1.36	76.7	19,595	19,671	8.43	0.74	37.7	20,141
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.93	6.67	7.21	50.2	0.17	0.19	6.59	6.78	0.19	1.17	1.35	76.7	18,490	18,566	8.44	0.77	1.20	19,007

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.55	5.44	5.57	39.2	0.12	0.16	4.71	4.87	0.16	0.83	0.99	76.7	13,822	13,899	8.27	0.56	11.8	14,284
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.83	0.99	1.02	7.15	0.02	0.03	0.86	0.89	0.03	0.15	0.18	12.7	2,288	2,301	1.37	0.09	1.95	2,365

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.08	5.46	5.67	59.7	0.17	0.11	6.59	6.70	0.10	1.17	1.27	—	17,852	17,852	0.57	0.72	37.5	18,117
Area	0.45	1.84	0.02	2.55	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.5	10.5	< 0.005	< 0.005	—	10.5
Energy	0.12	0.06	1.13	0.95	0.01	0.09	—	0.09	0.09	—	0.09	—	1,684	1,684	0.16	0.01	—	1,691
Water	—	—	—	—	—	—	—	—	—	—	—	7.87	48.0	55.9	0.81	0.02	—	82.1
Waste	—	—	—	—	—	—	—	—	—	—	—	68.8	0.00	68.8	6.88	0.00	—	241
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Total	6.66	7.37	6.82	63.2	0.18	0.20	6.59	6.79	0.19	1.17	1.36	76.7	19,595	19,671	8.43	0.74	37.7	20,141
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.80	5.19	6.08	49.2	0.16	0.11	6.59	6.70	0.10	1.17	1.27	—	16,757	16,757	0.58	0.74	0.97	16,993
Area	—	1.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.12	0.06	1.13	0.95	0.01	0.09	—	0.09	0.09	—	0.09	—	1,684	1,684	0.16	0.01	—	1,691
Water	—	—	—	—	—	—	—	—	—	—	—	7.87	48.0	55.9	0.81	0.02	—	82.1
Waste	—	—	—	—	—	—	—	—	—	—	—	68.8	0.00	68.8	6.88	0.00	—	241
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23

Total	5.93	6.67	7.21	50.2	0.17	0.19	6.59	6.78	0.19	1.17	1.35	76.7	18,490	18,566	8.44	0.77	1.20	19,007
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.11	3.67	4.43	36.5	0.12	0.08	4.71	4.78	0.07	0.83	0.90	—	12,082	12,082	0.42	0.53	11.6	12,263
Area	0.31	1.71	0.01	1.74	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.17	7.17	< 0.005	< 0.005	—	7.19
Energy	0.12	0.06	1.13	0.95	0.01	0.09	—	0.09	0.09	—	0.09	—	1,684	1,684	0.16	0.01	—	1,691
Water	—	—	—	—	—	—	—	—	—	—	—	7.87	48.0	55.9	0.81	0.02	—	82.1
Waste	—	—	—	—	—	—	—	—	—	—	—	68.8	0.00	68.8	6.88	0.00	—	241
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Total	4.55	5.44	5.57	39.2	0.12	0.16	4.71	4.87	0.16	0.83	0.99	76.7	13,822	13,899	8.27	0.56	11.8	14,284
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.75	0.67	0.81	6.66	0.02	0.01	0.86	0.87	0.01	0.15	0.17	—	2,000	2,000	0.07	0.09	1.91	2,030
Area	0.06	0.31	< 0.005	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.19	1.19	< 0.005	< 0.005	—	1.19
Energy	0.02	0.01	0.21	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	279	279	0.03	< 0.005	—	280
Water	—	—	—	—	—	—	—	—	—	—	—	1.30	7.95	9.25	0.13	< 0.005	—	13.6
Waste	—	—	—	—	—	—	—	—	—	—	—	11.4	0.00	11.4	1.14	0.00	—	39.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	0.83	0.99	1.02	7.15	0.02	0.03	0.86	0.89	0.03	0.15	0.18	12.7	2,288	2,301	1.37	0.09	1.95	2,365

3. Construction Emissions Details

3.1. Grading (2030) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.38	2.84	22.3	28.5	0.07	0.91	—	0.91	0.84	—	0.84	—	7,078	7,078	0.29	0.06	—	7,102
Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.16	1.22	1.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	388	388	0.02	< 0.005	—	389
Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.22	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	64.2	64.2	< 0.005	< 0.005	—	64.4
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.92	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	266	266	< 0.005	0.01	0.02	269
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.02	14.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.47
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Building Construction (2030) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.40	1.17	10.7	16.0	0.03	0.31	—	0.31	0.29	—	0.29	—	2,913	2,913	0.12	0.02	—	2,923
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.40	1.17	10.7	16.0	0.03	0.31	—	0.31	0.29	—	0.29	—	2,913	2,913	0.12	0.02	—	2,923
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.92	0.77	7.03	10.6	0.02	0.21	—	0.21	0.19	—	0.19	—	1,921	1,921	0.08	0.02	—	1,928
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.93	< 0.005	0.04	—	0.04	0.03	—	0.03	—	318	318	0.01	< 0.005	—	319
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.32	0.00	0.00	0.32	0.32	0.00	0.08	0.08	—	315	315	< 0.005	0.01	0.74	320
Vendor	0.01	0.01	0.26	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	262	262	< 0.005	0.04	0.52	275
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.01	0.00	0.00	0.32	0.32	0.00	0.08	0.08	—	290	290	< 0.005	0.01	0.02	294
Vendor	0.01	0.01	0.27	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	262	262	< 0.005	0.04	0.01	274
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.70	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	194	194	< 0.005	0.01	0.21	196
Vendor	0.01	< 0.005	0.18	0.06	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	173	173	< 0.005	0.03	0.15	181

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	32.1	32.1	< 0.005	< 0.005	0.03	32.5
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.6	28.6	< 0.005	< 0.005	0.02	30.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2031) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	1.14	10.4	15.9	0.03	0.29	—	0.29	0.27	—	0.27	—	2,913	2,913	0.12	0.02	—	2,923
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	1.14	10.4	15.9	0.03	0.29	—	0.29	0.27	—	0.27	—	2,913	2,913	0.12	0.02	—	2,923
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.47	4.30	6.62	0.01	0.12	—	0.12	0.11	—	0.11	—	1,209	1,209	0.05	0.01	—	1,213
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	0.09	0.78	1.21	< 0.005	0.02	—	0.02	0.02	—	0.02	—	200	200	0.01	< 0.005	—	201
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	1.24	0.00	0.00	0.32	0.32	0.00	0.08	0.08	—	310	310	< 0.005	< 0.005	0.65	312
Vendor	0.01	0.01	0.25	0.08	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	253	253	< 0.005	0.04	0.45	265
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.94	0.00	0.00	0.32	0.32	0.00	0.08	0.08	—	286	286	< 0.005	0.01	0.02	289
Vendor	0.01	0.01	0.26	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	254	254	< 0.005	0.04	0.01	265
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.41	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	120	120	< 0.005	< 0.005	0.12	122
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	105	105	< 0.005	0.02	0.08	110
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	19.9	19.9	< 0.005	< 0.005	0.02	20.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	17.4	17.4	< 0.005	< 0.005	0.01	18.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2030) - Unmitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.75	6.77	10.6	0.02	0.24	—	0.24	0.22	—	0.22	—	1,844	1,844	0.07	0.01	—	1,851
Paving	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.37	0.58	< 0.005	0.01	—	0.01	0.01	—	0.01	—	101	101	< 0.005	< 0.005	—	101
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.7	16.7	< 0.005	< 0.005	—	16.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.72	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	207	207	< 0.005	0.01	0.01	209

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.01	11.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2030) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.05	1.48	< 0.005	0.01	—	0.01	0.01	—	0.01	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	3.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.05	1.48	< 0.005	0.01	—	0.01	0.01	—	0.01	—	178	178	0.01	< 0.005	—	179

Architect Coatings	—	3.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.50	0.71	< 0.005	0.01	—	0.01	0.01	—	0.01	—	85.4	85.4	< 0.005	< 0.005	—	85.6
Architectural Coatings	—	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.1	14.1	< 0.005	< 0.005	—	14.2
Architectural Coatings	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.26	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	63.1	63.1	< 0.005	< 0.005	0.15	63.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.20	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	58.0	58.0	< 0.005	< 0.005	< 0.005	58.7
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	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.2	28.2	< 0.005	< 0.005	0.03	28.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.66	4.66	< 0.005	< 0.005	0.01	4.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2031) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.04	1.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	3.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.04	1.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	178	178	0.01	< 0.005	—	179

Architectural	—	3.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.43	0.61	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	73.9	73.9	< 0.005	< 0.005	—	74.1
Architectural Coatings	—	1.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.2	12.2	< 0.005	< 0.005	—	12.3
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.25	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	62.1	62.1	< 0.005	< 0.005	0.13	62.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.19	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	57.1	57.1	< 0.005	< 0.005	< 0.005	57.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.0	24.0	< 0.005	< 0.005	0.02	24.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.97	3.97	< 0.005	< 0.005	< 0.005	4.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	6.08	5.46	5.67	59.7	0.17	0.11	6.59	6.70	0.10	1.17	1.27	—	17,852	17,852	0.57	0.72	37.5	18,117
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	6.08	5.46	5.67	59.7	0.17	0.11	6.59	6.70	0.10	1.17	1.27	—	17,852	17,852	0.57	0.72	37.5	18,117

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	5.80	5.19	6.08	49.2	0.16	0.11	6.59	6.70	0.10	1.17	1.27	—	16,757	16,757	0.58	0.74	0.97	16,993
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.80	5.19	6.08	49.2	0.16	0.11	6.59	6.70	0.10	1.17	1.27	—	16,757	16,757	0.58	0.74	0.97	16,993
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.75	0.67	0.81	6.66	0.02	0.01	0.86	0.87	0.01	0.15	0.17	—	2,000	2,000	0.07	0.09	1.91	2,030
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.75	0.67	0.81	6.66	0.02	0.01	0.86	0.87	0.01	0.15	0.17	—	2,000	2,000	0.07	0.09	1.91	2,030

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Elementary	—	—	—	—	—	—	—	—	—	—	—	—	272	272	0.03	< 0.005	—	274
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	65.2	65.2	0.01	< 0.005	—	65.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	337	337	0.04	0.01	—	340
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	272	272	0.03	< 0.005	—	274
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	65.2	65.2	0.01	< 0.005	—	65.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	337	337	0.04	0.01	—	340
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	45.1	45.1	0.01	< 0.005	—	45.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	10.8	10.8	< 0.005	< 0.005	—	10.9
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	55.8	55.8	0.01	< 0.005	—	56.3

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.12	0.06	1.13	0.95	0.01	0.09	—	0.09	0.09	—	0.09	—	1,347	1,347	0.12	< 0.005	—	1,351
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
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.12	0.06	1.13	0.95	0.01	0.09	—	0.09	0.09	—	0.09	—	1,347	1,347	0.12	< 0.005	—	1,351
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.12	0.06	1.13	0.95	0.01	0.09	—	0.09	0.09	—	0.09	—	1,347	1,347	0.12	< 0.005	—	1,351
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
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.12	0.06	1.13	0.95	0.01	0.09	—	0.09	0.09	—	0.09	—	1,347	1,347	0.12	< 0.005	—	1,351
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.02	0.01	0.21	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	223	223	0.02	< 0.005	—	224
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
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.02	0.01	0.21	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	223	223	0.02	< 0.005	—	224

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.42	0.02	2.55	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.5	10.5	< 0.005	< 0.005	—	10.5
Total	0.45	1.84	0.02	2.55	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.5	10.5	< 0.005	< 0.005	—	10.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.19	1.19	< 0.005	< 0.005	—	1.19
Total	0.06	0.31	< 0.005	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.19	1.19	< 0.005	< 0.005	—	1.19

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	7.87	48.0	55.9	0.81	0.02	—	82.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.87	48.0	55.9	0.81	0.02	—	82.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Elementary School	—	—	—	—	—	—	—	—	—	—	—	7.87	48.0	55.9	0.81	0.02	—	82.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.87	48.0	55.9	0.81	0.02	—	82.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1.30	7.95	9.25	0.13	< 0.005	—	13.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.30	7.95	9.25	0.13	< 0.005	—	13.6

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	68.8	0.00	68.8	6.88	0.00	—	241

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	68.8	0.00	68.8	6.88	0.00	—	241
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	68.8	0.00	68.8	6.88	0.00	—	241
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	68.8	0.00	68.8	6.88	0.00	—	241
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	11.4	0.00	11.4	1.14	0.00	—	39.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	11.4	0.00	11.4	1.14	0.00	—	39.9

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Grading	Grading	1/1/2030	1/28/2030	5.00	20.0	—
Building Construction	Building Construction	1/29/2030	7/31/2031	5.00	393	—

Paving	Paving	1/29/2030	2/25/2030	5.00	20.0	—
Architectural Coating	Architectural Coating	5/1/2030	7/31/2031	5.00	327	—

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
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Building Construction	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Paving	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	22.5	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	24.6	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	9.59	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.92	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	87,783	29,261	7,579
Architectural Coating	0.00	0.00	87,783	29,261	7,579

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	—	60.0	0.00	—
Paving	0.00	0.00	0.00	0.00	2.90

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Elementary School	0.00	0%
Parking Lot	2.39	100%
Other Non-Asphalt Surfaces	0.51	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O

2030	0.00	261	0.03	< 0.005
2031	0.00	261	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Elementary School	1,589	0.00	0.00	414,275	23,794	0.00	0.00	6,203,527
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	87,783	29,261	7,579

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Elementary School	380,866	261	0.0330	0.0040	1,401,042
Parking Lot	91,199	261	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	261	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Elementary School	4,106,250	7,391,250
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Elementary School	127.75	0.00
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. 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	21.3	annual days of extreme heat
Extreme Precipitation	2.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth

Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	88.8
AQ-PM	95.3
AQ-DPM	90.8
Drinking Water	97.1
Lead Risk Housing	13.3
Pesticides	71.3
Toxic Releases	73.2
Traffic	80.7

Effect Indicators	—
CleanUp Sites	42.6
Groundwater	26.4
Haz Waste Facilities/Generators	86.6
Impaired Water Bodies	43.8
Solid Waste	37.6
Sensitive Population	—
Asthma	20.1
Cardio-vascular	53.7
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	56.5
Housing	38.8
Linguistic	41.4
Poverty	51.4
Unemployment	73.4

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	72.92441935
Employed	55.33170794
Median HI	79.96920313
Education	—
Bachelor's or higher	45.02758886
High school enrollment	100

Preschool enrollment	29.03888105
Transportation	—
Auto Access	61.56807391
Active commuting	9.110740408
Social	—
2-parent households	57.34633646
Voting	22.89233928
Neighborhood	—
Alcohol availability	79.8665469
Park access	4.401385859
Retail density	31.29731811
Supermarket access	44.06518671
Tree canopy	8.879763891
Housing	—
Homeownership	57.84678558
Housing habitability	81.6501989
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	73.73283716
Uncrowded housing	66.03361992
Health Outcomes	—
Insured adults	60.86231233
Arthritis	0.0
Asthma ER Admissions	74.4
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0

Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	28.1
Cognitively Disabled	43.0
Physically Disabled	65.4
Heart Attack ER Admissions	38.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	55.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	39.2
Elderly	79.3
English Speaking	52.2
Foreign-born	54.0
Outdoor Workers	26.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	42.1
Traffic Density	79.9

Traffic Access	23.0
Other Indices	—
Hardship	52.9
Other Decision Support	—
2016 Voting	50.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	74.0
Healthy Places Index Score for Project Location (b)	53.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per VRSP and TTM
Construction: Construction Phases	Per Applicant

Construction: Off-Road Equipment	Per Applicant; Equipment runs 8 hrs/day
Operations: Vehicle Data	Trip rates per Traffic Study
Operations: Water and Waste Water	Per WSA

APPENDIX B

Table 1 – Total Construction-Related Fuel Consumption

Vernola Ranch Specific Plan Project

Fuel	Consumption	
Diesel		
On-Road Construction Trips[1]	170,783	Gallons
Off-Road Construction Equipment[2]	515,825	Gallons
Diesel Total	**686,609**	**Gallons**
Gasoline		
On-Road Construction Trips[1]	623,153	Gallons
Off-Road Construction Equipment[3]	-	Gallons
Gasoline Total	**623,153**	**Gallons**

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod for construction in 2024 and fleet-average fuel consumption in gallons per mile from EMFAC2021 web based data for Riverside County. See Table 2 for calculation details.
2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
3. All emissions from off-road construction equipment were assumed to be diesel.

Table 2 – On-Road Construction Trip Estimates

Vernola Ranch Specific Plan Project

Trip Type	Trips	Trip length	Vehicle Miles Traveled (VMT)	Fuel Efficiency	Annual Fuel Usage[1]	
	(trips)	(miles)	(miles)	(mpg)	(Fuel)	(gallon)
Worker[2,3]	861,585	18.5	15,939,317	26.2	Gasoline	623,153
Vendor[4]	121,529	10.2	1,239,595	7.5	Diesel	170,721
Hauling[5]	19	20	379	6.1	Diesel	62

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod output (See Appendix A) for construction and fleet-average fuel consumption in gallons per mile from EMFAC2021 web based data for 2024 in Riverside County.
2. Worker trips were assumed to be 100% gasoline powered vehicles.
3. Per CalEEMod, worker Trips were assumed to be 25% LDA, 50% LDT1, and 25% LDT2.
4. Vendor trips were assumed to be 50% MHDT and 50% HHDT, split evenly between the MHDT and HHDT construction categories.
5. Per CalEEMod, hauling trips were assumed to be 100% HHDT.

Table 3 – Annual Energy Consumption from Operation

Vernola Ranch Specific Plan Project

Fuel Type	Energy Consumption	Units	Natural Gas	Units
Electricity				
Building[1]	14,564,772	kWh/year	**37,200,110**	kBTU/yr
Water[2]	997,693	kWh/year		
Total Electricity	**15,562,465**	kWh/year		
Mobile[3]				
Gasoline	**3,070,977**	gallons/year		
Diesel	**580,650**	gallons/year		

Notes:

1. Building electricity use from CalEEMod output (See Appendix A).
2. Calculated based on the Project's annual water consumption from the Water Supply Assessment and CalEEMod defaults using CalEEMod SCAQMD energy intensity of 0.005306 kWhr per gallon for supply, distribution, and treatment of outdoor water and .006807 kWhr per gallon for supply, distribution, and treatment of indoor water and wastewater treatment.
3. Mobile source fuel use based on annual vehicle miles traveled (VMT) from CalEEMod output for operational years for each phase (2027, 2029, and 2031, respectively) and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data in Riverside County.