

Appendix C

Air Quality Technical Report

PASEO NORTE SENIOR AFFORDABLE HOUSING PROJECT

Air Quality Technical Report

Prepared for

County of San Diego Department of General Services
5560 Overland Avenue, Suite 410
San Diego, CA 92123

November 2023



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EXECUTIVE SUMMARY

This report presents an assessment of potential air quality impacts associated with the proposed Paseo Norte Senior Affordable Housing Project (project) in Ramona, California. The project site is located along Main Street between 12th Street and 13th Street in the downtown area of the unincorporated community of Ramona in San Diego County. The project site occupies 7.86 acres and is located on assessor's parcel numbers (APNs) 281-182-17 and 281-182-18.

A previously approved Initial Study/Mitigated Negative Declaration (IS/MND) published in 2017 evaluated impacts for the Ramona Intergenerational Community Campus that included the following: (1) a 12,500-square-foot senior facility; (2) a 5,000-square-foot adult day care center; (3) a 14,000-square-foot community gymnasium and teen café; (4) a 20,000-square-foot childcare center; (5) a 10,000-square-foot family resource center; (6) a 3,660-square-foot community support center; (7) approximately 230 parking spaces; and (8) various recreational and infrastructure improvements to support the new facilities. The revised project includes: (1) 100 affordable senior residential units; (2) a 1,800-square-foot senior center (located within the proposed residential building); (3) a 5,000-square-foot Program for All-Inclusive Care for the Elderly (PACE) Wellness Center; (4) 98 parking spaces; and (5) a 4.39-acre public park area (including a multipurpose trail, two pickleball courts, and a tot lot).

The project would result in emissions of air pollutants from the construction phase and operational phase of the project. Construction emissions would include emissions associated with fugitive dust, heavy construction equipment, and construction workers commuting to and from the site. Emissions of criteria pollutants during construction would be below the County's recommended screening-level thresholds.

Similar to the previous Ramona Intergenerational Community Campus project evaluated in the 2017 IS/MND, to reduce the emissions to the extent feasible, fugitive dust control measures will be implemented during construction. Measures that are incorporated into the project to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Application of water three times daily to unpaved roads
- Reduce speeds to 15 mph on unpaved roads
- Use architectural coatings with a VOC content of 50 grams per liter (g/L) or less for exterior coatings and 50 g/L or less for interior coatings (SDAPCD Rule 67.0.1)
- In accordance with County of San Diego Planning and Development Services requirements, the project will require the construction contractor to use a minimum of Tier 3 equipment.

These measures constitute best management practices for dust control, architectural coatings, diesel particulate, and construction equipment emissions.

Operational emissions would be generated from vehicle trips, energy use, consumer products, reapplication of architectural coatings, and landscaping. Emissions of air pollutants would be below the County's recommended screening-level thresholds.

A health risk assessment (HRA) was conducted to evaluate the potential for project construction or operations to result in a significant impact to nearby sensitive receptors. The HRA focused on diesel particulate matter, which is designated by the State as a toxic air contaminant (TAC) emitted from diesel-fueled vehicles. The HRA concluded that risks would be less than significant.

An evaluation of other emissions, such as those leading to odors, indicated that impacts would be less than significant.

PASEO NORTE SENIOR AFFORDABLE HOUSING PROJECT

Air Quality Technical Report

1.0 Introduction

ESA has conducted an air quality assessment to evaluate the potential air quality impacts associated with construction activities, mobile sources, building energy demand, and other aspects of project construction and operations that have the potential to generate criteria air pollutant emissions. The objectives of this Air Quality Technical Report are to:

- Evaluate the construction and operational criteria air pollutant emissions associated with project development and the potential for regional and localized air quality impacts based on applicable standards and thresholds.
- Provide, if needed, air quality mitigation measures as required to meet applicable air quality standards and Air Quality Impact Analysis (AQIA) Trigger Levels as specified by the San Diego County Air Pollution Control District (SDAPCD), which have been adopted as Screening Level Thresholds (SLTs) by the County of San Diego and were identified under the New Source Review (NSR) program.

1.1 Project Location

The project site is located along Main Street between 12th Street and 13th Street in the downtown area of the unincorporated community of Ramona in San Diego County. The project site occupies 7.86 acres and is located on assessor's parcel numbers (APNs) 281-182-17 and 281-182-18. The project site is generally bounded by Walnut Street and Santa Maria Creek to the north; the terminus of 12th Street and vacant parcels to the east; vacant land and the Ramona Branch Library with multiple degraded concrete pads to the south; and Maple Street/13th Street and a salvage yard to the west. The project site is shown in **Figure 1, Vicinity Location Map**.

1.2 Project Description

A previously approved Initial Study/Mitigated Negative Declaration (IS/MND) published in 2017, which was supported by a 2015 Air Quality Technical Report prepared for the previous Ramona Intergenerational Community Campus project, evaluated impacts for the Ramona Intergenerational Community Campus in the same location that included the following: (1) a 12,500-square-foot senior facility; (2) a 5,000-square-foot adult day care center; (3) a 14,000-square-foot community gymnasium and teen café; (4) a 20,000-square-foot childcare center; (5) a 10,000-square-foot family resource center; (6) a 3,660-square-foot community support center; (7) approximately 230 parking spaces; and (8) various recreational and infrastructure improvements to support the new facilities. While approved, construction of the 2017 project never commenced.



SOURCE: ESRI

Paseo Norte Senior Affordable Housing Project

Figure 1
Vicinity Location Map

Since approval of the 2017 project, state and county priorities have shifted towards affordable housing projects to help alleviate the existing housing crisis. The revised project site plan is shown in **Figure 2, Site Plan**. The revised project includes: (1) a 1,800-square-foot senior center (located within the proposed residential building); (2) 100 affordable senior residential units; (3) a 5,000-square-foot PACE Wellness Center; (4) 98 parking spaces; and (5) a 4.39-acre public park area. The proposed public park would include open space with shade trees, two pickleball courts, a tot lot, and a walking trail located north of the residential building/ senior center uses and PACE Wellness Center. Project construction would include 500 cubic yards of soil excavation and a maximum of 5,500 cubic yards of imported fill to prepare the vacant site for new development, surface parking, and the building construction and architectural coating of up to 100 dwelling units, a senior center, and PACE Wellness Center. The other components of the 2017 project are no longer part of this project and there are no known plans for these components.

The proposed project includes a Developer Disposition Agreement, Minor Use Permit (ZAP), Boundary Adjustment, and a Density Bonus application to authorize the proposed mixed-use development. The proposed project would be compatible with the existing General Plan designations and zoning upon approval of a minor use permit (ZAP).

1.3 Existing Air Quality Conditions

1.3.1 Regional Air Quality

The project area, like the rest of San Diego County's inland valley areas, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The average annual temperature in the Escondido area (the nearest climatic monitoring station where temperature data are measured) is 61.6°F, with an average maximum temperature of 75.9°F and an average minimum temperature of 47.4°F. The highest temperatures occur in July and August, when the average maximum temperature is 88.2°F. The lowest temperatures occur in January, when the average minimum temperature is 37.1°F. The average annual precipitation is 16.22 inches. Most precipitation occurs from November through April.¹

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces prevailing westerly to northwesterly winds. These winds tend to transport pollutants from the coastal areas toward the inland areas. Data collected by the SDAPCD indicate that pollutant levels are often lower at the coast and higher inland as pollutants become trapped by the local mountains. Pollutants may also be trapped by periodic temperature inversions. A temperature inversion is a thin layer of the atmosphere where the decrease in temperature with elevation is less than normal. The inversion does not allow pollutants to be transported, but traps pollutants resulting in increased concentrations. Generally, the morning inversion layer is lower than the afternoon inversion layer; therefore, pollutant concentrations tend to be higher in the afternoon.

¹ Western Regional Climate Center. 1893-1979. Period of Record Monthly Climate Summary for Escondido, California (042862). Available online at: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2862>. Accessed September 2023.



SOURCE: Wakeland, 2022

Paseo Norte Senior Affordable Housing Project

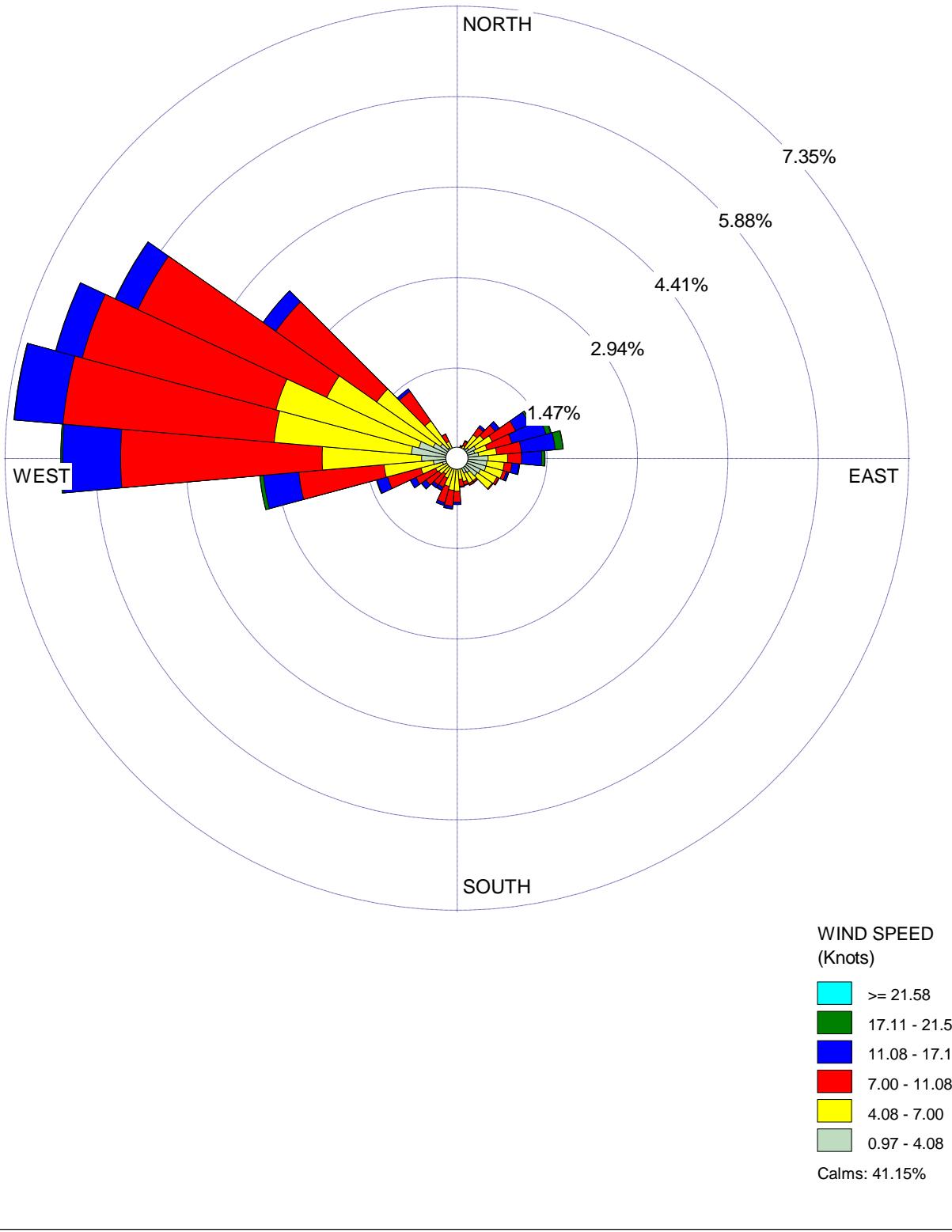
Figure 2
Site Plan

The SDAPCD measures meteorological data in locations where it operates a monitoring station. There is no monitoring station that measures micro-scale meteorology in the Ramona area. The nearest monitoring station to the site is the Escondido monitoring station. The project site is located in the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year.

Figure 3, Ramona Airport Windrose, provides a graphic representation of the prevailing winds in the project vicinity, as measured from the Ramona Airport meteorological station located in San Diego County. The high-pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high-pressure cell comes into contact with cooler marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone (O_3), commonly known as smog.

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the United States Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state, and local regulatory agencies. These pollutants are referred to as “criteria air pollutants” as a result of the specific standards, or criteria, which have been adopted for them. A brief description of the health effects of these criteria air pollutants is provided below.



SOURCE: California Air Resources Board
<https://ww2.arb.ca.gov/resources/documents/harp-aermod-meteorological-files>

Paseo Norte Senior Affordable Housing Project

Figure 3
Ramona Airport Windrose

Ozone (O_3): O_3 is a secondary pollutant formed by the chemical reaction of volatile organic compounds (VOCs) and nitrogen oxides (NO_x) in the presence of sunlight under favorable meteorological conditions, such as high temperature and stagnation episodes. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. According to the USEPA, O_3 can cause the muscles in the airways to constrict, potentially leading to wheezing and shortness of breath.² O_3 can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases such as asthma, emphysema and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease.³ Long-term exposure to O_3 is linked to aggravation of asthma, and is likely to be one of many causes of asthma development. Long-term exposures to higher concentrations of O_3 may also be linked to permanent lung damage, such as abnormal lung development in children.⁴ According to the California Air Resources Board (CARB), inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms, and exposure to O_3 can reduce the volume of air that the lungs breathe in and cause shortness of breath.⁵ The USEPA states that the people most at risk from breathing air containing O_3 include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.⁶ Children are at greatest risk from exposure to O_3 because their lungs are still developing and they are more likely to be active outdoors when O_3 levels are high, which increases their exposure.⁷ According to CARB, studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to O_3 and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults.⁸ Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures.⁹ Further research may be able to better distinguish between health effects in children and adults.¹⁰

Nitrogen Dioxide (NO_2) and Nitrogen Oxides (NO_x): NO_x is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include nitrogen dioxide (NO_2) and nitric oxide (NO). Ambient air quality standards have been promulgated for NO_2 , which is a reddish-brown reactive gas.¹¹ The principal form of NO_x produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO_2 , creating the mixture of

² United States Environmental Protection Agency, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>, last updated January 14, 2021. Accessed September 2023.

³ United States Environmental Protection Agency, Health Effects of Ozone Pollution.

⁴ United States Environmental Protection Agency, Health Effects of Ozone Pollution.

⁵ California Air Resources Board, Ozone & Health, Health Effects of Ozone, <https://ww2.arb.ca.gov/resources/ozone-and-health>. Accessed September 2023.

⁶ United States Environmental Protection Agency, Health Effects of Ozone Pollution.

⁷ United States Environmental Protection Agency, Health Effects of Ozone Pollution.

⁸ California Air Resources Board, Ozone & Health, Health Effects of Ozone.

⁹ California Air Resources Board, Ozone & Health, Health Effects of Ozone.

¹⁰ California Air Resources Board, Ozone & Health, Health Effects of Ozone.

¹¹ California Air Resources Board, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed September 2023.

NO and NO₂ referred to as NO_x.¹² Major sources of NO_x include emissions from cars, trucks and buses, power plants, and off-road equipment.¹³ The terms NO_x and NO₂ are sometimes used interchangeably. However, the term NO_x is typically used when discussing emissions, usually from combustion-related activities, and the term NO₂ is typically used when discussing ambient air quality standards. Where NO_x emissions are discussed in the context of the thresholds of significance or impact analyses, the discussions are based on the conservative assumption that all NO_x emissions would oxidize in the atmosphere to form NO₂. According to the USEPA, short-term exposures to NO₂ can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions, and visits to emergency rooms, while longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections.¹⁴ According to CARB, controlled human exposure studies that show that NO₂ exposure can intensify responses to allergens in allergic asthmatics.¹⁵ In addition, a number of epidemiological studies have demonstrated associations between NO₂ exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses.¹⁶ Infants and children are particularly at risk from exposure to NO₂ because they have disproportionately higher exposure to NO₂ than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration while in adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease.¹⁷ CARB states that much of the information on distribution in air, human exposure and dose, and health effects is specifically for NO₂ and there is only limited information for NO and NO_x, as well as uncertainty in relating health effects to NO or NO_x exposure.¹⁸

Carbon Monoxide (CO): Carbon monoxide (CO) is primarily emitted from combustion processes and motor vehicles due to the incomplete combustion of fuel, such as natural gas, gasoline, or wood, with the majority of outdoor CO emissions coming from mobile sources.¹⁹ According to the USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness, and death.²⁰ Very high levels of CO are not likely to occur outdoors; however, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease, since these people already have a reduced ability to get

¹² California Air Resources Board, Nitrogen Dioxide & Health.

¹³ United States Environmental Protection Agency, Nitrogen Dioxide (NO₂) Pollution, <https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2>, last updated July 25, 2023. Accessed September 2023.

¹⁴ United States Environmental Protection Agency, Nitrogen Dioxide (NO₂) Pollution.

¹⁵ California Air Resources Board, Nitrogen Dioxide & Health.

¹⁶ California Air Resources Board, Nitrogen Dioxide & Health.

¹⁷ California Air Resources Board, Nitrogen Dioxide & Health.

¹⁸ California Air Resources Board, Nitrogen Dioxide & Health.

¹⁹ California Air Resources Board, Carbon Monoxide & Health, <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>. Accessed September 2023.

²⁰ United States Environmental Protection Agency, Carbon Monoxide (CO) Pollution in Outdoor Air, <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution>, last updated July 13, 2023. Accessed September 2023.

oxygenated blood to their hearts and are especially vulnerable to the effects of CO when exercising or under increased stress.²¹ In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina.²² According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain.²³ For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress; inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance.²⁴ Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO.²⁵

Sulfur Dioxide (SO₂): According to the USEPA, the largest source of sulfur dioxide (SO₂) emissions in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities, while smaller sources of SO₂ emissions include industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.²⁶ In 2006, California phased in the ultra-low-sulfur diesel regulation, limiting vehicle diesel fuel to a sulfur content not exceeding 15 parts per million, down from the previous requirement of 500 parts per million, substantially reducing emissions of sulfur from diesel combustion.²⁷ According to the USEPA, short-term exposures to SO₂ can harm the human respiratory system and make breathing difficult.²⁸ According to CARB, health effects at levels near the state one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Exposure at elevated levels of SO₂ (above 1 part per million (ppm)) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.²⁹ Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO₂.^{30,31}

Particulate Matter (PM₁₀ and PM_{2.5}): Particulate matter air pollution is a mixture of solid particles and liquid droplets found in the air.³² Some particles, such as dust, dirt, soot, or smoke,

²¹ United States Environmental Protection Agency, Carbon Monoxide (CO) Pollution in Outdoor Air

²² United States Environmental Protection Agency, Carbon Monoxide (CO) Pollution in Outdoor Air

²³ California Air Resources Board, Carbon Monoxide & Health.

²⁴ California Air Resources Board, Carbon Monoxide & Health.

²⁵ California Air Resources Board, Carbon Monoxide & Health.

²⁶ United States Environmental Protection Agency, Sulfur Dioxide (SO₂) Pollution, <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics>, last updated February 16, 2023. Accessed September 2023.

²⁷ California Air Resources Board, Final Regulation Order, Amendments to the California Diesel Fuel Regulations, Amend Section 2281, Title 13, California Code of Regulations, <https://www.arb.ca.gov/regact/ulsd2003/fro2.pdf>, approved July 15, 2004. Accessed September 2023.

²⁸ United States Environmental Protection Agency, Sulfur Dioxide (SO₂) Pollution.

²⁹ California Air Resources Board, Sulfur Dioxide & Health, <https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health>. Accessed September 2023.

³⁰ California Air Resources Board, Sulfur Dioxide & Health.

³¹ United States Environmental Protection Agency, Sulfur Dioxide (SO₂) Pollution.

³² United States Environmental Protection Agency, Particulate Matter (PM) Pollution, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>, last updated July 11, 2023. Accessed September 2023.

are large or dark enough to be seen with the naked eye, while other particles are so small they can only be detected using an electron microscope.³³ Particles are defined by their diameter for air quality regulatory purposes: inhalable particles with diameters that are generally 10 micrometers and smaller (PM_{10}) and fine inhalable particles with diameters that are generally 2.5 micrometers and smaller ($PM_{2.5}$).³⁴ Thus, $PM_{2.5}$ comprises a portion or a subset of PM_{10} . Sources of PM_{10} emissions include dust from construction sites, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; and wind-blown dust from open lands.³⁵ Sources of $PM_{2.5}$ emissions include combustion of gasoline, oil, diesel fuel, or wood.³⁶ PM_{10} and $PM_{2.5}$ may be either directly emitted from sources (primary particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO_2 , NO_x , and certain organic compounds.³⁷ According to CARB, both PM_{10} and $PM_{2.5}$ can be inhaled, with some depositing throughout the airways; PM_{10} is more likely to deposit on the surfaces of the larger airways of the upper region of the lung while $PM_{2.5}$ is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage and lung inflammation.³⁸ Short-term (up to 24 hours duration) exposure to PM_{10} has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits.³⁹ The effects of long-term (months or years) exposure to PM_{10} are less clear, although studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer.⁴⁰ Short-term exposure to $PM_{2.5}$ has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days, and long-term exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.⁴¹ According to CARB, the populations most likely to experience adverse health effects with exposure to PM_{10} and $PM_{2.5}$ include older adults with chronic heart or lung disease, children, and asthmatics, and children and infants are more susceptible to harm from inhaling pollutants such as PM_{10} and $PM_{2.5}$ compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems.⁴²

Lead (Pb): Major sources of lead emissions include ore and metals processing, piston-engine aircraft operating on leaded aviation fuel, waste incinerators, utilities, and lead-acid battery

³³ United States Environmental Protection Agency, Particulate Matter (PM) Pollution.

³⁴ United States Environmental Protection Agency, Particulate Matter (PM) Pollution.

³⁵ California Air Resources Board, Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}), <https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health>. Accessed September 2023.

³⁶ California Air Resources Board, Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}).

³⁷ California Air Resources Board, Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}).

³⁸ California Air Resources Board, Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}).

³⁹ California Air Resources Board, Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}).

⁴⁰ California Air Resources Board, Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}).

⁴¹ California Air Resources Board, Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}).

⁴² California Air Resources Board, Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}).

manufacturers.⁴³ In the past, leaded gasoline was a major source of lead emissions; however, the removal of lead from gasoline has resulted in a decrease of lead in the air by 98 percent between 1980 and 2014.⁴⁴ Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system, and affects the oxygen carrying capacity of blood.⁴⁵ The lead effects most commonly encountered in current populations are neurological effects in children, such as behavioral problems and reduced intelligence, anemia, and liver or kidney damage.⁴⁶ Excessive lead exposure in adults can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain.⁴⁷

Volatile Organic Compounds. VOCs are organic chemical compounds of carbon and are not “criteria” pollutants themselves; however, they contribute with NO_x to form O₃, and are regulated to prevent the formation of O₃.⁴⁸ According to CARB, some VOCs are highly reactive and play a critical role in the formation of O₃, other VOCs have adverse health effects, and in some cases VOCs can be both highly reactive and have adverse health effects.⁴⁹ VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids, internal combustion associated with motor vehicle usage, and consumer products (e.g., architectural coatings).⁵⁰

1.3.2 Local Air Quality

Existing Ambient Air Quality in the Surrounding Area

The SDAPCD maintains a network of air quality monitoring stations located throughout San Diego County to measure ambient pollutant concentrations. While the previous project evaluated in the 2017 IS/MND used ambient air quality from the Escondido Monitoring Station, this station is currently suspended for relocation. Therefore, the Rancho Carmel Drive monitoring station, located at 11403 Rancho Carmel Drive, San Diego, CA, 92128, was used for NO₂ and CO; the Alpine monitoring station located at 2300 W. Victoria Dr., Alpine, CA, 91901, was used for O₃; and the El Cajon-Lexington Elementary School monitoring station located at 533 S. First St., El Cajon, CA, 92019, was used for PM₁₀ and PM_{2.5}. The most recent data available from these

⁴³ United States Environmental Protection Agency, Lead Air Pollution, <https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution>, last updated July 5, 2023. Accessed September 2023.

⁴⁴ United States Environmental Protection Agency, Lead Air Pollution.

⁴⁵ United States Environmental Protection Agency, Lead Air Pollution.

⁴⁶ California Air Resources Board, Lead & Health, <https://ww2.arb.ca.gov/resources/lead-and-health>. Accessed May 2021.

⁴⁷ California Air Resources Board, Lead & Health.

⁴⁸ United States Environmental Protection Agency, Technical Overview of Volatile Organic Compounds, <https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds>, last updated March 14, 2023. Accessed September 2023.

⁴⁹ California Air Resources Board, Toxic Air Contaminants Monitoring, Volatile Organic Compounds, <https://ww2.arb.ca.gov/our-work/programs/air-toxics->. Accessed September 2023.

⁵⁰ California Air Resources Board, Toxic Air Contaminants Monitoring, Volatile Organic Compounds.

monitoring stations is from years 2020 to 2022.^{51,52} The pollutant concentration data for these years are summarized in **Table 1, Pollutant Standards and Ambient Air Quality Data**.

TABLE 1
POLLUTANT STANDARDS AND AMBIENT AIR QUALITY DATA

Pollutant/Standard ^a	2020	2021	2022
O₃ (1-hour)			
Maximum Concentration (ppm)	0.11	0.10	0.10
Days > CAAQS ^b (0.09 ppm)	5	2	2
O₃ (8-hour)			
Maximum Concentration (ppm)	0.09	0.08	0.09
Fourth High 8-hour Concentration (ppm)	0.077	0.086	0.086
Days > CAAQS (0.070 ppm)	24	15	24
Days > NAAQS (0.075 ppm)	13	6	9
NO₂ (1-hour)			
Maximum Concentration (ppm)	0.0054	0.0054	0.0056
Days > CAAQS (0.180 ppm)	0	0	0
Fourth High Concentration (ppm)	0.055	0.055	0.058
Days > NAAQS (0.100 ppm)	0	0	0
NO₂ (Annual)			
Annual Arithmetic Mean (0.030 ppm)	0.013	0.013	0.015
CO (1-hour)			
Maximum Concentration (ppm)	3.3	3.0	2.2
Days > CAAQS (20 ppm)	0	0	0
Days > NAAQS (35 ppm)	0	0	0
CO (8-hour)			
Maximum Concentration (ppm)	1.41	1.1	1.1
Days > CAAQS (9.0 ppm)	0	0	0
Days > NAAQS (9 ppm)	0	0	0
PM₁₀ (24-hour)			
Maximum Concentration ($\mu\text{g}/\text{m}^3$)	55	40	44
Samples > CAAQS (50 $\mu\text{g}/\text{m}^3$)	0	0	0
Samples > NAAQS (150 $\mu\text{g}/\text{m}^3$)	0	0	0
PM₁₀ (Annual Average)			
Annual Arithmetic Mean (20 $\mu\text{g}/\text{m}^3$)	23.5	22.0	21.6

⁵¹ California Air Resources Board, Top 4 Summary, <https://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed September 2023.

⁵² SDAPCD, 5-Year Air Quality Monitoring Network Assessment 2022. <https://www.sdapcd.org/content/dam/sdapcd/documents/monitoring/5-Year-Air-Quality.pdf>. Accessed September 2023.

Pollutant/Standard ^a	2020	2021	2022
PM_{2.5} (24-hour)			
Maximum Concentration ($\mu\text{g}/\text{m}^3$)	38.2	30.2	26.4
Fourth High Concentration ($\mu\text{g}/\text{m}^3$)	26.2	50.4	30.5
Samples > NAAQS (35 $\mu\text{g}/\text{m}^3$)	0	0	0
PM_{2.5} (Annual)			
Annual Arithmetic Mean (12 $\mu\text{g}/\text{m}^3$)	10.35	9.7	8.9

NOTES:

^a ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter^b CAAQS = California Ambient Air Quality StandardsSOURCE: California Air Resources Board, Top 4 Summary, <https://www.arb.ca.gov/adam/topfour/topfourdisplay.php>. Accessed April 2021.

Sensitive Receptors

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. The nearest sensitive land uses to the project site are shown in **Figure 4, Sensitive Receptor Locations Nearest to the Project Site**. Sensitive receptors in the vicinity of the site include single- and multi-family residences to the south of the site across Main Street and to the west and southwest of the site across 14th Street, which are indicated in the yellow shaded area in Figure 4. The residences include Nickel Creek Townhomes which is located approximately 550 feet to the west of the project site, Valle Del Sol Apartments which is located approximately 650 feet to the southwest of the project site, and Peppertree Apartments which is located approximately 365 feet to the west of the project site. Localized air quality impacts are quantified for the nearest residential sensitive receptor. The majority of uses surrounding the site are commercial.

Other air quality sensitive receptors in the vicinity of the project site include the Arch Health Medical Group Urgent Care Clinic approximately 400 feet to the south. As air quality sensitive receptors are located at greater distances from the project site, they would be less impacted by project emissions.

1.4 Existing Site Emissions

The project site is currently vacant; therefore, all project-related emissions are considered net new.

2.0 Regulatory Setting

A number of statutes, regulations, plans and policies have been adopted which address air quality concerns. The project site and vicinity are subject to air quality regulations developed and implemented at the federal, State, and local levels. At the federal level, the USEPA is responsible for implementation of the federal Clean Air Act. Some portions of the Clean Air Act (e.g., certain mobile source requirements and other requirements) are implemented directly by the USEPA. Other portions of the Clean Air Act (e.g., stationary source requirements) are implemented through delegation of authority to state and local agencies. Plans and policies that are relevant to the project are discussed below.



SOURCE: ESA, 2021; ESRI

Paseo Norte Senior Affordable Housing Project

Figure 4
Sensitive Receptor Locations Nearest to the Project Site

2.1 Federal

The federal Clean Air Act of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, the USEPA is responsible for implementation of certain portions of the Clean Air Act including mobile source requirements. Other portions of the Clean Air Act, such as stationary source requirements, are implemented by state and local agencies.

The Clean Air Act establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The 1990 Amendments to the Clean Air Act identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions) of the Clean Air Act are most applicable to the development and operations of the project. Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: (1) O₃, (2) NO₂, (3) CO, (4) SO₂, (5) PM₁₀, and (6) Pb. The NAAQS were updated in 1997 to include separate standards for PM_{2.5}, which is a subset of PM₁₀ emissions. **Table 2, Ambient Air Quality Standards**, shows the NAAQS currently in effect for each criteria pollutant.

TABLE 2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards ^a		National Standards ^b		
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
O ₃ ^h	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
NO ₂ ⁱ	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	None	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		53 ppb (100 µg/m ³)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m ³)		9 ppm (10 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	

Pollutant	Average Time	California Standards ^a		National Standards ^b					
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g			
SO ₂ ^j	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb(196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)			
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)				
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ^j	—				
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ^j	—				
PM ₁₀ ^k	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis			
	Annual Arithmetic Mean	20 µg/m ³		—					
PM _{2.5} ^k	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis			
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³ ^k	15 µg/m ³				
Pb ^{l,m}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption			
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ^m	Same as Primary Standard				
	Rolling 3- Month Average ^m	--		0.15 µg/m ³					
Visibility Reducing Particles ⁿ	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards					
Sulfates (SO ₄)	24 Hour	25 µg/m ³	Ion Chromatography						
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence						
Vinyl Chloride ^l	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography						

NOTES:

- a California standards for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- b National standards (other than O₃, PM₁₀, PM_{2.5}, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
- c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- d Any equivalent procedure which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.

Pollutant	Average Time	California Standards ^a		National Standards ^b			
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g	
^e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.							
^f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.							
^g Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.							
^h On October 1, 2015, the national 8-hour O ₃ primary and secondary standards were lowered from 0.075 to 0.070 ppm.							
ⁱ To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.							
^j On June 2, 2010, a new 1-hour SO ₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO ₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.							
^k On December 14, 2012, the national annual PM _{2.5} primary standard was lowered from 15 µg/m ³ to 12.0 µg/m ³ .							
^l CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.							
^m The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m ³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.							
ⁿ In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.							
SOURCE: California Air Resources Board, Ambient Air Quality Standards (5/4/16), https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards . Accessed February 2019.							

The project is located within the SDAB, which is currently designated as a moderate nonattainment area for the 8-hour NAAQS for O₃. The SDAB is in attainment for the NAAQS for all other criteria pollutants. Over the past several years, San Diego County has experienced substantial improvement in ambient O₃ levels, according to data collected at the monitoring stations. Total region-wide NO_x and VOC emissions, which are O₃ precursors, have been substantially reduced over time, and additional requirements under the 2022 Regional Air Quality Strategy (RAQS) will continue emissions reductions of O₃ precursors. The proposed control measures under the 2022 RAQS are estimated to reduce VOC emissions by approximately 0.04 tons per day and NO_x emissions by 0.59 tons per day.⁵³ The SDAB is currently classified as a nonattainment area under the California Ambient Air Quality Standards (CAAQS) for O₃, PM_{2.5}, and PM₁₀. **Table 3, San Diego Air Basin Attainment Status**, lists the criteria pollutants and their relative attainment status.

The Clean Air Act also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for basins not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones.

⁵³ SDAPCD, 2022. 2022 Regional Air Quality Strategy for San Diego County. March 2022.

TABLE 3
SAN DIEGO AIR BASIN ATTAINMENT STATUS

Pollutant	National Standards (NAAQS)	California Standards (CAAQS)
O ₃ (1-hour standard)	Attainment ^a	Non-attainment
O ₃ (8-hour 2015 standard)	Non-attainment - Severe	Non-attainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
PM ₁₀	Unclassifiable ^b	Non-attainment
PM _{2.5}	Attainment	Non-attainment
Pb	Attainment	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified

NOTES: N/A = not applicable

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

^b At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

SOURCE: SDAPCD, Attainment Status. Available: <https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html>. Accessed April 29, 2021.; USEPA, Green Book. Available: <https://www3.epa.gov/airquality/greenbook/jbcs.html#CA>. Accessed April 29, 2021.

Title II of the Clean Air Act pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_x emissions have been lowered substantially, and the specification requirements for cleaner-burning gasoline are more stringent.

2.2 State

2.2.1 California Air Resources Board

CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emission standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's SIP, for which it works closely with the federal government and local air districts. The SIP is required for the state to take over implementation of the federal Clean Air Act from the USEPA.

2.2.2 California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include state-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act, responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. Table 2 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the state. As shown in Table 2, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 3 provides a summary of the attainment status of the SDAB with respect to the state standards. The Air Basin is designated as attainment for the California standards for lead and sulfates and unclassified for visibility-reducing particles and hydrogen sulfide.

2.2.3 Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook* in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines; and (4) avoid siting sensitive receptors within 300 feet of a large gasoline dispensing facility (defined as a facility with a throughput of 3.6 million gallons per year or greater) or 50 feet of a typical gasoline dispensing facility. The project site is not within the screening distances of these land uses. The nearest boundary of the project site is located approximately 725 feet northwest of the Main Street; and approximately 850 feet northwest from the nearest gasoline station at the intersection of Main Street and 11th Street.

2.2.4 On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other vehicle emissions (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008, CARB approved the Truck and Bus regulation to reduce NO_x, PM₁₀, and PM_{2.5} emissions from existing diesel vehicles operating in California (13 CCR, Section 2025). The requirements were amended in December 2010 and apply to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the state subject to this option would meet or exceed the 2010 engine emission standards for NO_x and particulate matter by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016, their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_x emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and buses by 2020.

In addition to limiting exhaust from idling trucks, CARB promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles in 2007. The In-Use Off-Road Diesel Fueled Fleets regulation aims to reduce emissions by installation of diesel soot filters and encourage the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR, Section 2449). Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets beginning compliance by January 1, 2014. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (e.g., engine retrofits) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program includes components to reduce smog-forming pollution, reduce greenhouse gas (GHG) emissions, promote clean cars, and provide the fuels for clean cars. The zero emissions vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (PHEV) in the 2018 to 2025 model years. By 2025, California has set a goal to have 1.5 million zero-emission vehicles on its roads and highways.⁵⁴

In May 2016, CARB released the updated Mobile Source Strategy that demonstrates how the state can simultaneously meet air quality standards, achieve GHG emission reduction targets,

⁵⁴ CARB. 2017. The Advanced Clean Cars Program. Available online at: <https://www.arb.ca.gov/msprog/acc/acc.htm>. Accessed April 2021.

decrease health risk from transportation emissions, and reduce petroleum consumption over the next fifteen years, through a transition to ZEVs, cleaner transit systems and reduction of vehicle miles traveled. The Mobile Source Strategy calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) by 2025 and 4.2 million ZEVs by 2030. It also calls for more stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero-emission trucks primarily for class 3–7 “last mile” delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions, and a 50 percent reduction in the consumption of petroleum-based fuels.⁵⁵

In 2021 CARB released the Advance Clean Trucks regulation and in 2023 CARB released the Advanced Clean Fleet regulation. The primary goal of the ACF regulation is to accelerate the market for zero-emission trucks, vans, and buses by requiring fleets that are well suited for electrification, to transition to ZEVs where feasible. CARB was directed to ensure that fleets, businesses, and public entities that own or direct the operation of medium- and heavy-duty vehicles in California purchase and operate ZEVs to achieve a smooth transition to ZEV fleets by 2045 everywhere feasible.^{56,57}

2.3 Regional

2.3.1 San Diego County Air Pollution Control District (SDAPCD)

The SDAPCD is the agency responsible for the administration and enforcement of air quality regulations in San Diego County. The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, 2009, and most recently 2016.⁵⁸ The RAQS outlines SDAPCD’s plans and control measures designed to attain the state air quality standards for O₃. The 2016 Revision of the RAQS contains an overview of statutory requirements, air quality assessment, recent and projected future emission reduction rates, adopted and proposed control measures, overview of incentive programs, review of the Transportation Control Measures Plan, and reaffirmation that if state emission 5 percent per year reduction of O₃ precursors is not feasible, then alternative strategies must be identified and every feasible control measure implemented.⁵⁹ The SDAPCD has also developed the air basin’s input to the SIP, which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards. The SIP includes the SDAPCD’s plans and control measures for attaining the O₃ NAAQS. Most recently, SDAPCD published the 2020 San Diego Ozone State

⁵⁵ CARB. 2016. Mobile Source Strategy. Available online at <https://ww3.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>.

⁵⁶ CARB. 2021. Advanced Clean Trucks. <https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-trucks-fact-sheet>, accessed September 2023.

⁵⁷ CARB 2023. Advanced Clean Fleets Regulation Summary. <https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary>, accessed September 2023.

⁵⁸ SDAPCD, Air Quality Planning, <https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning.html>, last updated February 2, 2021.

⁵⁹ SDAPCD, 2016. 2016 Revision of the Regional Air Quality Strategy for San Diego County.

Implementation Plan for attaining the federal 8-hour 75 ppb and 70 ppb O₃ standards by 2026 and 2032, respectively.⁶⁰

The SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations would apply and are relevant to the proposed project.

SDAPCD Regulation II: Permits; Rule 20.2: New Source Review – Non-Major Sources.

Applies to any new or modified stationary source, to any new or modified emission unit and to any relocated emission unit that is not considered a major stationary source. As applied to new or modified sources, the rule (1) requires the use of Best Available Control Technology (BACT) where the emissions of PM₁₀, NO_x, VOC, or SO_x would increase by 10 pounds per day or more; (2) requires an air quality impact analysis if the emissions of PM₁₀, NO_x, VOC, SO_x, or lead exceed designated trigger levels; and (3) establishes public noticing requirements prior to issuance of a permit-to-operate from the SDAPCD.

SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions. Prohibits any activity causing air contaminant emissions darker than 20 percent opacity for more than an aggregate of 3 minutes in any consecutive 60-minute time period. In addition, Rule 50 prohibits any diesel pile-driving hammer activity causing air contaminant emissions for a period or periods aggregating more than 4 minutes during the driving of a single pile.

SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance. Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property.

SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust. Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site. The rule defines the term “commercial” as work conducted for financial compensation by other than a tenant or property owner.

SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings. Architectural coatings were previously regulated under former District Rule 67.0 (Architectural Coatings, repealed effective January 1, 2016) and are now regulated under Rule 67.0.1 (Architectural Coatings, adopted on June 24, 2015). Rule 67.0.1 incorporates the tighter VOC limits of CARB’s 2007 Suggested Control Measures and is estimated to reduce VOC emissions in San Diego County by 839.5 tons per year (2.3 tons per day) with a cost-effectiveness of \$1.12 per pound of VOC reduced.⁶¹ Requires manufacturers, distributors, and end users of architectural and

⁶⁰ CARB, 2020 San Diego Ozone State Implementation Plan, 2020, <https://ww2.arb.ca.gov/our-work/programs/california-state-implementation-plans/nonattainment-area-plans/san-diego-county-0>. Accessed April 2021.

⁶¹ SDAPCD, 2016. 2016 Revision of the Regional Air Quality Strategy for San Diego County.

industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

SDAPCD Regulation XI: National Emission Standards for Hazardous Air Pollutants.

Subpart M, Rule 361.145: Standard for Demolition and Renovation. Requires owners and operators of a demolition or renovation activity to provide written notification of planned asbestos stripping or removal to the Control Officer no less than 10 days prior to demolition and/or asbestos removal. A Notification of Demolition and Renovation Form and fee is required with written notification. Procedures for asbestos emission control are provided under Rule 361.145 and must be followed in accordance with this regulation. Rule 361.145 requires notification and work practice standards for asbestos removal and demolition, as specified under Rule 40, Code of Federal Regulations 61, Subpart M.

SDAPCD Regulation XII: Toxic Air Contaminants. Applies to any new, relocated, or modified emission unit which may increase emissions of one or more TACs and for which an Authority to Construct or Permit to Operate is required, or for which a Notice of Intention or Application for Certification has been accepted by the California Energy Commission. The increase in maximum incremental cancer risk at every receptor location shall be equal to or less than 1 in one million for any project for which new, relocated, or modified emission units that increases maximum incremental cancer risk are not equipped with best available control technology for toxics (T-BACT) and 10 in one million for units equipped with T-BACT.

2.3.2 San Diego Association of Governments

SANDAG is the federally designated metropolitan planning organization (MPO) for San Diego County region and is responsible for transportation planning. As a regional agency, SANDAG is not responsible for local land use management including land using zoning regulations or general plan designations (49 U.S.C. 5301 et. seq.) On December 2021, the SANDAG Board of Directors adopted the 2021 Regional Plan (Regional Plan).

The plan combines the Regional Transportation Plan (RTP), Sustainable Communities Strategy (SCS), and Regional Comprehensive Plan. As such, the 2021 Regional Plan must comply with specific state and federal mandates, including an SCS, per Senate Bill 375 (Steinberg, 2008), that achieves greenhouse gas emission reduction targets set by CARB, compliance with federal civil rights requirements (Title VI) and environmental justice considerations, air quality conformity, and a public participation process.

Air quality in the region has improved significantly over the past four decades as measured by the decreasing trend in the number of days with an Air Quality Index (AQI) over 100. The USEPA uses the AQI as an index for reporting daily air quality. The greater the level of air pollution and the greater the health concern. For example, an AQI value of 50 represents good air quality with little potential to affect public health, while an AQI value over 300 represents hazardous air quality. An AQI value of 100 generally corresponds to the national air quality standard for the pollutant, which is the level USEPA has set to protect public health. AQI values below 100 are considered satisfactory. When AQI values are above 100, air quality is considered to be unhealthy—at first for certain sensitive groups of people, then for everyone as AQI values get

higher.⁶² In particular, the number of days exceeding the federal 2008 O₃ standard has dropped from 179 days in 1981 to 12 days in 2014.⁶³

In December 2021, the SANDAG Board of Directors approved the 2021 Regional Plan to provide a long-term blueprint for the San Diego region that seeks to meet regulatory requirements, address traffic congestion, and create equal access to jobs, education, healthcare, and other community resources. The plan combines the RTP, SCS, and Regional Comprehensive Plan. As such, the 2021 Regional Plan must comply with specific state and federal mandates, including an SCS, per Senate Bill 375 (Steinberg, 2008), that achieves greenhouse gas emission reduction targets set by the CARB; compliance with federal civil rights requirements (Title VI); and environmental justice considerations, air quality conformity, and a public participation process.⁶⁴

3.0 Significance Thresholds

Pursuant to Appendix G of the 2019 State *CEQA Guidelines*, the project would result in a significant impact related to air quality if it would:

- a. Conflict with or obstruct the implementation of the applicable air quality plan;
- b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;
- c. Expose sensitive receptors to substantial pollutant concentrations; or
- d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The County of San Diego has approved guidelines for determining significance based on Appendix G.III of the State CEQA Guidelines. Section 4.0 of the County Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality provides guidance that a project would have a significant environmental impact if:⁶⁵

1. The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).
2. The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. The project will result in emissions that exceed 250 pounds per day of NO_x, or 75 pounds per day of VOCs.

⁶² USEPA. 2019, Air Quality Index (AQI) Basics. Available online at: <https://airnow.gov/index.cfm?action=aqibasics.aqi>. Accessed September 2023.

⁶³ San Diego Association of Governments (SANDAG), 2015. San Diego Forward: A Regional Plan. October 2015.

⁶⁴ SANDAG, 2021 Regional Transportation Plan, <https://www.sandag.org/regional-plan/2021-regional-plan/final-2021-regional-plan>, Accessed September 2023.

⁶⁵ County of San Diego, Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality, March 19, 2007, <https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf>. Accessed September 2023.

4. The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
5. The project will result in emissions of PM_{2.5} that will exceed 55 pounds per day.
6. The project will result in emissions of PM₁₀ that exceed 100 pounds per day and increase the ambient PM₁₀ concentration by 5 micrograms per cubic meter (5.0 µg/m³) or greater at the maximum exposed individual.
7. The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable federal or state Ambient Air Quality Standard (including emissions which exceed the screening level thresholds for O₃ precursors listed in Table 5 of the Guidelines).
8. The project will expose sensitive receptors to substantial pollutant concentrations.
9. The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

The County of San Diego has adopted the SDAPCD's established Trigger Levels (Rules 20.2 et seq.) for new or modified stationary sources as Screening Level Thresholds (SLTs) for use in determining CEQA air quality impacts. While SDAPCD has not developed specific thresholds of significance to evaluate construction and operation criteria pollutant impacts within CEQA documents, SDAPCD's Regulation II, Rules 20.2 and 20.3 (new source review for non-major and major stationary sources, respectively) outline AQIA Trigger Levels for regional criteria pollutants for new or modified sources. Based on SDAPCD's AQIA Trigger Levels, as well as USEPA rulemaking and CEQA thresholds adopted by the South Coast Air Quality Management District (SCAQMD), the County has established SLTs to assist lead agencies in determining the significance of project-level regional air quality impacts within the county. These are detailed in the bullet points under Section 3.1, Construction Emissions, and Section 3.2, Operational Emissions.

The SLTs are based on the AQIA trigger levels, and these trigger levels are based on emission levels identified under the New Source Review (NSR) program. The NSR program requires that stationary sources receive permits before construction begins and/or the use of equipment. By permitting stationary sources, the NSR program ensures that new emissions would not slow regional progress toward attaining the NAAQS. SDAPCD's Trigger Levels outlined in Rules 20.2 and 20.3 were set as the total emission thresholds associated with the NSR program to help attain and maintain the NAAQS from new and modified non-major stationary sources.

Projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. Also, projects that are consistent with the SIP rules (i.e., the federally approved rules and regulations adopted by the SDAPCD) are consistent with the SIP. Thus, projects would be required to conform with measures adopted in the RAQS (including use of low-VOC architectural coatings, use of low-NO_x water heaters, and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the SDAPCD.

3.1 Construction Emissions

SDAPCD Rule 20.2, New Source Review Non-Major Stationary Sources, has established AQIA Trigger Levels and the County has adopted the AQIA Trigger Levels as quantitative SLTs to determine whether there would be a significant impact to air quality for CEQA purposes. The SLTs are based on AQIA Trigger Levels which were identified under the NSR program. Air quality impacts related to the proposed project estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented below, which are based on SDAPCD Trigger Levels, are exceeded during construction:

- 100 pounds per day for PM₁₀
- 55 pounds per day for PM_{2.5}
- 250 pounds per day for NO_x
- 250 pounds per day for SO_x
- 550 pounds per day for CO
- 137 pounds a day for VOC⁶⁶

Currently, the County of San Diego does not have a localized threshold of significance for construction emissions.

3.2 Operational Emissions

SDAPCD Rule 20.2, New Source Review Non-Major Stationary Sources, has established AQIA Trigger Levels and the County has adopted the AQIA Trigger Levels as quantitative SLTs to determine whether there would be a significant impact to air quality for CEQA purposes. The SLTs are based on AQIA Trigger Levels which were identified under the NSR program. Air quality impacts related to the proposed project estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented below, which are based on SDAPCD Trigger Levels, are exceeded during operation:

- 100 pounds per day or 15 tons per year for PM₁₀
- 55 pounds per day or 10 tons per year for PM_{2.5}
- 25 pounds per hour, 250 pounds per day, or 40 tons per year for NO_x
- 25 pounds per hour, 250 pounds per day, or 40 tons per year for SO_x
- 100 pounds per hour, 550 pounds per day, or 100 tons per year for CO
- 3.2 pounds per day or 0.6 tons per year for lead and lead compounds
- 137 pounds a day or 13.7 tons per year for VOC

⁶⁶ VOC threshold based on the significance thresholds recommended by the Monterey Bay Unified Air Pollution Control District for the North Central Coast Air Basin, which has similar federal and state attainment status as the San Diego Air Basin for O₃.

3.3 Toxic Air Contaminants

SDAPCD Regulation XII (Toxic Air Contaminants) states that the increase in maximum incremental cancer risk at every receptor location shall be equal to or less than 1 in one million for any project for which new, relocated, or modified emission units that increases maximum incremental cancer risk are not equipped with T-BACT and 10 in one million for units equipped with T-BACT. Per SDAPCD Rule 1210, the public health risk notification requirement for noncancer impacts is a health hazard index equal to or greater than 1.0.

4.0 Methodology

The methodology to evaluate potential impacts to regional and local air quality that may result from the construction and long-term operations of the project is presented below.

4.1 Construction Emissions

4.1.1 Daily Construction Emissions

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The emissions are estimated using the California Emissions Estimator Model (CalEEMod) version 2022.1.1 software, an emissions inventory software, which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professions to quantify potential criteria pollutant and GHG emissions from a variety of land use projects.

CalEEMod was developed in collaboration with the air districts of California. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory) have been provided by the various California air districts to account for local requirements and conditions. The model is considered to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California and is recommended by the SDAPCD and County of San Diego for construction emission calculations.

The construction equipment used CalEEMod defaults based on the land uses. Construction phase durations were carried over from the previous project evaluated in the 2017 IS/MND. Consistent with County of San Diego Planning and Development Services requirements and the previous project evaluated in the 2017 IS/MND, all construction equipment would meet Tier 3 requirements. Emissions from on-road vehicles were estimated outside of CalEEMod using emission factors from the CARB On Road Vehicle Emissions Factor Model version 2021 (EMFAC2021) for haul and material vendor trucks and worker vehicles. Activities parameters, such as number of pieces of equipment and equipment usage hours were based on CalEEMod defaults. The project would require 500 cubic yards of soil excavation and a maximum of 5,500 cubic yards of imported fill. Emissions from project construction activities were estimated based on the construction phase in which the activity would be occurring. Daily truck trips and default trip length data were used to assess roadway emissions from truck exhaust. The maximum daily emissions are estimated values for the worst-case day and do not represent the emissions that would occur for every day of construction of the proposed project. The maximum daily emissions

are compared to the SDAPCD daily regional numeric indicators. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in **Appendix A** of this Technical Report.

Project construction is estimated to start in winter 2024 but may commence at a later date. If this occurs, construction impacts would be lower than those analyzed here due to the use of a more energy-efficient and cleaner burning construction vehicle fleet mix, pursuant to state regulations that require vehicle fleet operators to phase in less polluting heavy-duty equipment. As a result, should project construction commence at a later date than analyzed in this analysis, air quality impacts would be lower than the impacts disclosed herein.

4.1.2 Toxic Air Contaminants

The greatest potential for TAC emissions during construction of the proposed project would be related to diesel particulate matter (DPM) emissions associated with heavy-duty equipment during demolition, excavation and grading activities, building construction, paving and architectural coating. Construction activities associated with the proposed project would be sporadic, transitory, and short term in nature. The construction HRA was performed in accordance with the 2015 Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA Guidance).⁶⁷ The analysis incorporates the estimated construction emissions and dispersion modeling using the USEPA AMS/EPA Regulatory Model (AERMOD) model with meteorological data provided by CARB from the Ramona Airport meteorological station located in San Diego County.

For the risk assessment, the AERMOD dispersion model output was converted into specific cancer risks and non-cancer chronic health hazard impacts. Health impacts addressed construction DPM emissions and the effects on nearby sensitive receptors (residential) within 1,000 feet of the project site. The analysis assumes that residential receptors may include newborns and children, as well as adults. Newborns and children tend to have higher exposure to pollutants because they have a higher breathing rate in proportion to the size of their body. In addition, the 2015 OEHHA Guidance applies age sensitivity factors to account for increased sensitivity to carcinogens during early-in-life exposure. As discussed above in Subsection 1.3.2, sensitive receptors in the vicinity of the site include single- and multi-family residences to the south of the site across Main Street and to the west and southwest of the site across 13th Street.

To assess the risk of potential health impacts (cancer or other acute or chronic conditions) related to TACs exposure from airborne emissions during the proposed project's construction activities, a refined quantitative construction HRA was prepared. Detailed parameters and calculations for the HRA are provided in **Appendix B** of this Technical Report.

⁶⁷ Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, (2015).

4.1.3 Operational Emissions

The project's operational emissions are estimated using the most recent version of CalEEMod software. CalEEMod was used to forecast the daily regional emissions from area sources that would occur during long-term operation of the proposed project. For transportation, the 2015 Air Quality Technical Report prepared for the previous Ramona Intergenerational Community Campus project calculated a total annual vehicle miles traveled of 3,807,278 miles.

Comparatively, the proposed project would result in 2,422,909 total annual miles. Similar to construction, operational emissions from on-road vehicles were estimated outside of CalEEMod using EMFAC2021. All vehicle types would visit the project site. Therefore, this assessment uses the SDAB's motor vehicle fleet mix and the fleet average calendar year emissions factors from EMFAC2021 to estimate mobile source operational emissions.

Area source emissions are based on landscaping equipment and consumer product usage (including paints) rates provided in CalEEMod. The project would implement similar low-flow faucets, toilets, and showers and water-efficient irrigation system as assumed in the previous project evaluated in the 2017 IS/MND. Solid waste diversion is assumed to be 60 percent as the County achieved 60 percent waste diversion in the unincorporated areas as of 2018.⁶⁸ The project would be designed with an all-electric building design and project buildings would not utilize natural gas or include natural gas infrastructure.

Operational emissions are considered to be all net new emissions as the existing site is vacant.

Toxic Air Contaminants

Freeways and high-traffic roads (an urban road with 100,000 vehicles per day, or a rural road with 50,000 vehicles per day) are considered sources of TAC emissions. CARB recommends siting sensitive land uses at least 500 feet from such sources. CARB also recommends avoiding siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week) and within 300 feet of any dry cleaning operation using perchloroethylene or 500 feet for drycleaners with two or more perchloroethylene machines. These criteria will be used to assess the potential for significant health risk impacts in excess of the significance threshold for TAC emissions from existing sources of emissions affecting the project and whether a more detailed health risk analysis is warranted.

CO Hotspots

There is no localized CO hotspot significance threshold methodology for the SDAPCD. Given this, guidance was drawn from the County of San Diego Guidelines for Determining Significance. Based on the County's guidance, CO hotspots may potentially occur at signalized intersections that operate at or below level of service (LOS) E with peak-hour trips for that intersection exceeding 3,000 trips.

⁶⁸ County of San Diego, Solid Waste, <https://www.sandiegocounty.gov/content/sdc/sustainability/Measures/solidwaste.html>, Accessed April 29, 2021.

Other Emissions (Odors)

Potential odor impacts are evaluated qualitatively, consistent with the guidance by SDAPCD and the County of San Diego. In addition, land use compatibility guidance from the neighboring SCAQMD, which is the air district for Los Angeles County (excluding the Antelope Valley), Orange County and the urbanized areas of Riverside and San Bernardino Counties, is relied on for evaluating land uses typically associated with odorous emissions. The analysis includes reviewing the site plan for the proposed project and project description to identify new or modified odor sources. If it is determined that the proposed project would introduce a potentially significant new odor source or modify an existing odor source, then downwind sensitive receptor locations are identified, and a site-specific analysis is conducted to determine impacts of the proposed project. The project is required to conform to SDAPCD Rule 51 (Public Nuisance), which prohibits emission of any material that may be considered a nuisance.

5.0 Environmental Impacts

5.1 Impacts Analysis

Impact 5-1: Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?

As described above, the SDAPCD RAQS is the regional air quality plan that is applicable to the area surrounding the project site. The RAQS contains rules and regulations that are implemented by the SDAPCD to help the SDAB meet the clean air standards required by federal and state law. The RAQS relies on projected growth in the county, as well as information on mobile, area, and other sources of emissions obtained from CARB and SANDAG to project future emissions within the county. Based on these emissions, reduction strategies are determined to reduce emissions in order to achieve or maintain attainment with state and federal standards. CARB mobile source emissions projections and SANDAG growth projections are generally based on the applicable General Plans (of the incorporated cities within the county and the County itself for unincorporated areas).

Therefore, projects that propose development consistent with the applicable General Plan would be consistent with the RAQS and the SIP. If a proposed development exceeds the growth projections, it would have a potentially significant impact on air quality. Currently, the project site is designated as Rural Commercial (C-4) and Rural Lands (RL-20). Prior to the County's purchase of the project site, Housing and Community Development Services worked with County partners and consultants to conduct a market study and due diligence land use analysis to evaluate the potential uses of the site and to determine the market conditions in the community. These studies concluded that there is strong demand for affordable senior housing in Ramona. As described in the Project Description, the proposed project would be compatible with the existing General Plan designations and zoning upon approval of a minor use permit (ZAP). The project would consist of approximately 100 affordable senior residential units, which would include 85 one-bedroom units and 15 two-bedroom units. Therefore, the project would conform to planned growth that is anticipated by the General Plan and result in compliance with state and local housing regulations and would be consistent with the population growth projections for the area.

As SANDAG does not have local land use or regulatory authority, the project's consistency with the County of San Diego General Plan would be sufficient to determine that the project would not conflict with SANDAG growth projections and the RAQS.

Additionally, the proposed project would comply with CARB regulatory requirements to minimize short-term emissions from on-road and off-road diesel construction equipment (i.e., 13 CCR, Section 2485 – anti-idling regulation; 13 CCR, Section 2025 – Truck and Bus regulation to reduce NO_x, PM₁₀, and PM_{2.5} emissions; and 13 CCR, Section 2449 – In-Use Off-Road Diesel Fueled Fleets regulation to reduce NO_x, PM₁₀, and PM_{2.5} emissions). The proposed project would also comply with SDAPCD regulations for controlling fugitive dust pursuant to SDAPCD Rule 55 - Fugitive Dust.

Compliance with these requirements is consistent with and meets the RAQS requirements for control measures intended to reduce emissions from construction equipment and activities. Therefore, the proposed project would not conflict with or obstruct implementation of the RAQS, and impacts would be **less than significant**.

Impact 5-2: Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction

Construction activities would temporarily generate emissions from equipment exhaust and mobile trips. The amount of emissions generated on a daily basis would vary depending on the intensity and types of construction activities occurring simultaneously. The San Diego Basin is currently classified as a federal non-attainment area for the 2015 8-hour standard for O₃ and a state non-attainment area for PM₁₀, PM_{2.5}, and O₃. Maximum daily construction emissions are shown in **Table 4, Estimated Regional Construction Emissions (Pounds Per Day)**. Accounting for both individual phases and overlapping phases, the construction emissions from the proposed project would not exceed the SDAPCD significance thresholds for PM₁₀, PM_{2.5}, VOC, or NO_x. Therefore, impacts would be **less than significant** with regard to a cumulatively considerable net increase for a criteria air pollutant in non-attainment during construction.

TABLE 4
ESTIMATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY)^a

Source	VOC	NO _x	CO	SO ₂	PM ₁₀ ^b	PM _{2.5} ^b
Site Preparation – 2024	<1	24.0	28.9	<1	8.8	4.8
Grading – 2024	<1	18.6	20.8	<1	4.2	2.1
Building Construction – 2024	1.3	14.9	23.7	<1	2.8	1.1
Building Construction – 2025	1.2	14.7	23.2	<1	2.8	1.1
Paving – 2025	<1	8.7	11.2	<1	<1	<1
Architectural Coating – 2025	4.1	1.6	2.7	<1	<1	<1
Overlapping Phases						
Building Construction + Paving + Architectural Coating – 2025	1.7	23.6	34.9	<1	3.3	1.5
Building Construction + Paving – 2025	5.8	25.1	37.1	<1	3.8	1.6

Source	VOC	NO _x	CO	SO ₂	PM ₁₀ ^b	PM _{2.5} ^b
Maximum Daily Emissions	5.8	25.1	37.1	<1	8.8	4.8
County Screening-Level Threshold	137	250	550	250	100	55
Exceeds Thresholds?	No	No	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A of this Technical Report.

^b Emissions include fugitive dust control measures consistent with South Coast Air Quality Management District Rule 403.

SOURCE: ESA, 2023.

Operation

Operational emissions were assessed for mobile, area, and stationary sources for the 2025 operational year. The proposed project would comply with the applicable requirements of 2022 Title 24 Building Energy Efficiency Standards, including the applicable requirements of the 2022 California Green Building Standards (CALGreen) Code (Title 24, Part 11) in effect at the time of building permit issuance. As shown in **Table 5, Estimated Regional Operational Emissions**, the operational emissions would not exceed the SDAPCD significance thresholds for PM₁₀, PM_{2.5}, VOC, or NO_x. Therefore, impacts would be **less than significant** with regard to a cumulatively considerable net increase for a criteria air pollutant in non-attainment during operation.

TABLE 5
ESTIMATED REGIONAL OPERATIONAL EMISSIONS (POUNDS PER DAY)^a

Source	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area (Architectural Coating, Consumer Products, Landscaping)	2.47	0.06	5.96	<1	<1	<1
Energy	0	0	0	0	0	0
Mobile	2.60	2.39	22.50	0.05	4.73	1.23
Total Regional Emissions	5.07	2.45	28.46	<1	4.73	1.23
County Screening-Level Threshold	137	250	550	250	100	55
Exceeds Thresholds?	No	No	No	No	No	No

NOTE:

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A of this Technical Report.

SOURCE: ESA, 2023.

Health Impacts from Regional Emissions

The USEPA and CARB have established the NAAQS and CAAQS, respectively, at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety. Further, California air districts, like the SDAPCD, have established emission-based thresholds that provide project-level estimates of criteria air pollutant quantities that air basins can accommodate without affecting the attainment dates. The standards were established at levels that provide public health protection and allow an adequate margin of safety, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Accordingly, elevated levels of criteria air pollutants as a result of a project's emissions could cause adverse

health effects associated with these pollutants. As shown previously in Table 3, the SDAB is designated as non-attainment for O₃ (8-hour) under the NAAQS and non-attainment for O₃ (1-hour and 8-hour), PM₁₀ and PM_{2.5} under the CAAQS.

As shown in Table 4, Estimated Regional Construction Emissions (Pounds Per Day), and Table 5, Estimated Regional Operational Emissions (Pounds Per Day), above, the project's construction and operational emissions would not exceed the mass regional emissions threshold and would likely not cause or contribute to the exposure of sensitive receptors to ground-level concentrations in excess of health-protective levels. Therefore, the health impacts from regional emissions would be **less than significant**.

Impact 5-3: Would the proposed project expose sensitive receptors to substantial pollutant concentrations?

Construction

As described in Impact 5-2, the proposed project would not exceed the mass regional emissions threshold during construction and would likely not cause or contribute to the exposure of sensitive receptors to ground-level concentrations in excess of health-protective levels.

Toxic Air Contaminants

Construction activities would emit DPM exhaust emissions from the use of off-road and on-road equipment and stationary sources (such as generators). Emissions modeling conducted for the project using CalEEMod evaluates diesel exhaust emissions as composed entirely of PM_{2.5} emissions. PM_{2.5} is a subset of PM₁₀; therefore, the PM₁₀ emissions reported in CalEEMod is used as a surrogate for DPM exhaust emissions. If the proposed project would emit carcinogenic materials or TACs that exceed the maximum incremental increase in cancer risk of 10 in one million or a noncancer hazard index of 1.0, impacts to sensitive receptors would be significant. Construction-related cancer risk and chronic noncancer hazard impacts were estimated and compared to this threshold.

Risk was calculated for the off-site residential receptors within approximately 1,000 feet of the project site to capture max risk impacts. AERMOD was used to quantify concentrations at the off-site receptors. Health risk calculations were performed using a spreadsheet tool consistent with OEHHA guidance. The spreadsheet tool incorporates the algorithms, equations, and a variable described above, as well as in the OEHHA guidance, and incorporates the results of the AERMOD dispersion model. The proposed project's detailed risk assessment is included as **Appendix B** of this Technical Report.

The maximum unmitigated incremental increase in cancer risk at the maximum impacted sensitive receptor would be up to approximately 3.8 in one million. The maximum risk would occur at the residential receptors located to the southeast of the project site and would not exceed the significance threshold of 10 in one million. In accordance with County of San Diego Planning and Development Services requirements, the project would require the construction contractor to use a minimum of Tier 3 equipment. As such, the project would be equipped with T-BACT and

the 10 in one million threshold applies to the project. Thus, the cancer risk for nearby sensitive receptors would be **less than significant**.

The chronic noncancer health impacts from construction of the proposed project would be approximately 0.008 for the maximum impacted sensitive receptor, which would be well below the significance threshold of 1.0. The maximum impacted receptors would be the residential receptors located to the southeast of the project site. Thus, the chronic noncancer health risk for nearby sensitive receptors would be **less than significant**.

Operation

As described in Impact 5-2, the proposed project would not exceed the mass regional emissions threshold during operation and would likely not cause or contribute to the exposure of substantial pollutant contributions to sensitive receptors.

Toxic Air Contaminants

As stated in the County of San Diego *Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality*, typically, land development projects generate some diesel emissions from small trucks during the operational phase.⁶⁹ During long-term operations, TACs could be emitted as part of periodic maintenance operations, cleaning, painting, etc., and periodic visits to the project site from delivery trucks and service vehicles. However, since the project is primarily residential with limited commercial uses and does not include industrial uses, the project would not generate or attract substantial numbers of delivery trucks and service vehicles (i.e., more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units per day). Project-related trucks that would visit the site would be required to comply with the applicable provisions of the CARB Truck and Bus regulation (13 CCR, Section 2025) and the CARB anti-idling regulation (13 CCR, Section 2485), which would minimize PM and NO_x emissions from diesel trucks. Therefore, project operations would not be a substantial source of diesel particulates. Furthermore, TAC emissions from periodic maintenance operations are expected to be sporadic and intermittent, which is typical of residential uses, and would result in minimal exposure to off-site and on-site sensitive receptors. Architectural coatings are regulated via SDAPCD Rule 67.0.1, which places limits on the VOC (some of which may be TACs) content of various coating categories. The project's land uses would not include installation of paint booths or require extensive use of commercial or household cleaning products. As a result, toxic or carcinogenic air pollutants are not expected to occur in any substantial amounts in conjunction with operation of the proposed land uses within the project site. Based on the uses expected on the project site, potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SDAPCD health risk significance thresholds. Thus, operation of the project would not expose sensitive receptors to substantial toxic air contaminant concentrations and operational impacts would be **less than significant**.

⁶⁹ County of San Diego, Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality, March 19, 2007, <https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf>. Accessed September 2023.

With regard to existing sources of TAC emissions impacting the project site, the project would develop residential uses (a sensitive land use) approximately 750 feet north of the CA-67 Freeway (Main Street) and approximately 1,100 feet west of the CA-78 Freeway, which are both beyond the 500 feet distance recommended in the CARB *Air Quality and Land Use Handbook*. There are no roadways within approximately 500 feet of the project site that would be considered high-traffic road volumes of 100,000 vehicles per day for an urban road or 50,000 vehicles per day for a rural road. The nearest dry cleaner is located over 3.9 miles to the east (Village Cleaner Dry Cleaners, 23660 San Vicente Road, Ramona, CA, 92065). Furthermore, the CARB Dry Cleaning Air Toxics Control Measure (17 CCR, Section 93109) requires the phase out of the use of perchloroethylene dry cleaning machines and related equipment by January 1, 2023, at which time dry cleaners would not be a source of perchloroethylene TAC emissions. There are no distribution centers within 1,000 feet of the project site. Therefore, the project site would not be located within the recommended distances of substantial sources of TAC emissions and the project would not expose future project residents to substantial sources of TAC emissions. Thus, impacts would be **less than significant**.

CO Hotspots

There is no localized CO hotspot significance threshold methodology for the SDAPCD. For this reason, this CO hotspot analysis relies on the County of San Diego Guidelines for Determining Significance.⁷⁰ CO hotspots may potentially occur at signalized intersections that operate at or below Level of Service (LOS)⁷¹ E with peak-hour trips for that intersection exceeding a screening level of 3,000 trips. The 2015 Traffic Impact Analysis for the Ramona Intergenerational Community Campus project, which was prepared for the previous project evaluated in the 2017 IS/MND identified one intersection, Main Street and 12th Street, that would operate at LOS E or worse. Based on the traffic projections, the proposed project would generate a total of 567 daily vehicle trips during weekdays and a maximum of 48 peak hour vehicle trips. The proposed project site is adjacent to Walnut Street, Maple Street/13th Street, and 12th Street and in proximity to Main Street. Walnut Street and Maple Street/13th Street are not thoroughfares and do not carry daily vehicle volumes of more than 10,000 average daily trips, which is generally equivalent to peak hour trips of approximately 1,000 trips or less.⁷² Main Street (at 12th Street) carries approximately 25,780 average daily trips while 12th Street (at Main Street) carries approximately 537 average daily trips based on the 2015 Traffic Impact Analysis. Conservatively assuming a 1 percent increase in the daily traffic volume, the segment of Main Street near 12th Street would be estimated to carry approximately 27,916 average daily trips (approximately 2,792

⁷⁰ County of San Diego, Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality, March 19, 2007, <https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf>. Accessed September 2023.

⁷¹ Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

⁷² The Federal Highway Administration had a general assumption that peak hour trips represent approximately 10 percent of daily trip volumes (the Federal Highway Administration considers 10 percent to be a standard assumption. See http://www.fhwa.dot.gov/planning/tmip/publications/other_reports/tod_modeling_procedures/ch02.cfm.

peak hour trips) and the segment of 12th Street near Main Street would be estimated to carry approximately 581 average daily trips (approximately 58 peak hour trips) in 2023.⁷³ Based on the project's 48 peak hour vehicle trips, the project would not cause peak-hour trips in excess of 3,000 trips at an intersection that operates at or below LOS E. Therefore, the proposed project would not generate vehicle trips that would cause roadways to exceed the County's screening level for CO hotspots and would not contribute considerably to the formation of a CO hotspot. The impact would be **less than significant**.

Impact 5-4: Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents, as well as the combustion of diesel fuel in on- and off-road equipment. SDAPCD Rule 67.0.1 limits the allowable amount of VOCs from architectural coatings and solvents. Consistent with SDAPCD Rule 67.0.1, the project would use architectural coatings with a VOC content of 50 g/L or less for exterior coatings and 50 g/L or less for interior coatings. Coatings for parking areas would use architectural coatings with a VOC content of 100 g/L or less. In addition, the project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Through mandatory compliance with SDAPCD rules, no construction activities or materials are expected to result in other emissions, such as those leading to objectionable odors, affecting a substantial number of people. Since compliance with SDAPCD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Furthermore, with respect to other emissions, criteria air pollutant emissions from those pollutants that are in attainment (CO, NO₂, and SO₂) would be less than significant (Table 4, Estimated Regional Construction Emissions). Therefore, the impact would be **less than significant**.

Operation

The County of San Diego *Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality*, identifies potential odor impacts from geothermal power plants, petroleum production and refining, sewers, and sewage treatment plants.⁷⁴ According to the SCAQMD *CEQA Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SDAPCD or the neighboring SCAQMD as being typically associated with objectionable or nuisance odors. Long-term operation of the proposed project would not introduce new sources of odors and would not create objectionable odors that could affect nearby sensitive receptors. The project is required to conform to SDAPCD Rule 51 (Public

⁷³ The Federal Highway Administration had a general assumption that peak hour trips represent approximately 10 percent of daily trip volumes (the Federal Highway Administration considers 10 percent to be a standard assumption. See http://www.fhwa.dot.gov/planning/tmip/publications/other_reports/tod_modeling_procedures/ch02.cfm.

⁷⁴ County of San Diego, Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality, March 19, 2007, <https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf>. Accessed September 2023.

Nuisance), which prohibits emission of any material that may be considered a nuisance. With respect to other emissions, criteria air pollutant emissions from those pollutants that are in attainment (CO, NO₂, and SO₂) would be less than significant (Table 5, Estimated Regional Operational Emissions). Therefore, potential odor impacts would be **less than significant**.

5.2 Level of Significance before Mitigation

Implementation of the proposed project would not result in a significant impact to air quality and the project would comply with the applicable provisions of SDAPCD Rules and Regulations including Rule 20.2: New Source Review – Non-Major Sources, Rule 50: Visible Emissions, Rule 51: Nuisance, Rule 55: Fugitive Dust, Rule 67.0.1: Architectural Coatings, Rule 361.145: Standard for Demolition and Renovation, Regulation XII: Toxic Air Contaminants; therefore, no mitigation measures are proposed.

5.3 Environmental Mitigation Measures

No mitigation measures are proposed.

5.4 Level of Significance after Mitigation

No significant impacts to air quality have been identified.

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Appendix A

Project Emissions Calculation Worksheets

A-1 Project Assumptions

Paseo Norte Apartment Project

Construction Assumptions

Project Land Uses								Project Site Acreage	7.86 acres
Land Use ¹	CalEEMod Land Use	CalEEMod Landuse Type	Size	Metric	Building SF	Building Metrics	Lot Acreage	Notes	
PACE Wellness Center	Commercial	Medical Office Building	5	SF spaces	5,000 0.88	SF acres	0.110 0.880	Updated based on email from PM 8.3.2023	
Parking	Parking	Parking Lot	98	Acre	4.39	acres	4.390	Updated based on email from PM 8.3.2023	
Outdoor Area	Recreational	City Park	4.39	SF	1,800	SF	0.045	Previously calculated	
Senior Center	Recreational	Health Club	1.8	DU	75,700	SF	2.432	Updated based on email from PM 8.3.2023	
Residential	Residential	Apartments Mid Rise	100				7.86	Updated based on email from PM 8.3.2023	

Notes

1 Land use acreage is an estimate of the total site acreage of 7.85 acres

Construction Schedule ¹														
Phase Name	CalEEMod Phase Type	Start Date	End Date	Total Days	Workers per day	Daily One-way Worker Trips	Trip Length ²	Vendor Trips per day	Daily One-Way Vendor Trips	Trip Length ²	Total Haul Trucks	Daily One-way Haul Trips	Trucks per day	Trip Length ²
Site Preparation	Site Preparation	1/1/2024	1/31/2024	27	9	18	11.97	0	0	7.63	0	0	0	20
Grading	Grading	2/1/2024	2/29/2024	25	10	20	11.97	0	0	7.63	429	858	18	20
Building Construction	Building Construction	3/1/2024	11/30/2025	548	115	230	11.97	26	52	7.63	0	0	0	20
Paving	Paving	3/1/2025	11/30/2025	235	8	16	11.97	1	2	7.63	0	0	0	20
Architectural Coating	Architectural Coating	7/1/2025	11/30/2025	131	23	46	11.97	5	10	7.63	0	0	0	20

Note: Same as 2017 MND but pushed forward to Winter 2024

Assume 6 days/week per client

Note: Defaults for building construction. Concrete vendor trips are in paving phase. Architectural coating trips are 20% of building construction trips.

Note: Haul trips based on excavation quantity.

Notes

1 Based on data needs request and 2017 MND

2 Trip Lengths based on CalEEMod defaults

CalEEMod Default Trips	Workers Trip/Day	Vendor Trip/Day	Haul Truck Trip/Day	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Notes
Site Preparation	18	0	0	11.97	7.63	20	CalEEMod Defaults
Grading	20	0	18	11.97	7.63	20	CalEEMod Defaults
Building Construction	230	52	0	11.97	7.63	20	CalEEMod Defaults
Paving	16	2	0	11.97	7.63	20	CalEEMod Defaults
Architectural Coating	46	10	0	11.97	7.63	20	CalEEMod Defaults

Paseo Norte Apartment Project

Construction Equipment

Phase Name	Equipment	Equipment Amount ¹	Hours per Day	Tier
Site Preparation	Rubber Tired Dozer Tractors/Loaders/Backhoes	3 4	8 8	Tier 3 Tier 3
Grading/Excavation	Graders Excavators Tractors/Loaders/Backhoes Rubber Tired Dozers	1 1 3 1	8 8 8 8	Tier 3 Tier 3 Tier 3 Tier 3
Building Construction	Forklifts Generator Sets Cranes Welders Tractors/Loaders/Backhoes	3 1 1 1 3	8 8 7 8 7	Tier 3 Tier 3 Tier 3 Tier 3 Tier 3
Paving	Pavers Paving Equipment Rollers	2 2 2	8 8 8	Tier 3 Tier 3 Tier 3
Architectural Coatings	Air Compressors	1	6	Tier 3

Notes:

1. CalEEMod Defaults. Equipment Mix-Using defaults as no further data is provided. Tier 3 is required by the County.

Paseo Norte Apartment Project

Excavation

Land Use Excavation/ Grading Quantities ¹	Export (CY)	Import (CY)
Excavation	500	5,500

Grading/Excavation	Export (CY)	Import (CY)
Entire Site Development	6,000	
Total Volume	6,000	

Grading/Excavation	Total	Notes
Haul Truck Capacity (CY)	14	<i>Assumption</i>
Total Haul Trucks	429	<i>Calculation</i>
Total One-way Haul Trips	858	<i>Calculation</i>
Duration (days)	25	<i>Haul Days</i>
Daily Haul Trucks	18	<i>Calculation</i>

Source: *Construction data needs*

Paseo Norte Apartment Project

concrete quantities to be estimated from site plan

Land Use	Concrete Volume (CY)	Concrete Truck Capacity (CY)	Total Trucks Needed (Vendor Trips)
Project	691	10	69

Land Use	Total Trucks
<i>Project</i>	69
Duration (days)	235
Maximum trucks per day	1.00
Maximum truck trips per day	2.00

Notes:

- 1 Assume 56,000 SF of surface parking at 4 in depth for a total of 18,667 CF or 691 CY

Paseo Norte Apartment Project
Operational GHG Analysis - Year 2025

Estimated Electricity demand from Electric Vehicle Supply Equipment (EVSE)

Land Use Type	Number of Parking Spaces	Number of Parking Spaces with EV Chargers	Average Charge (kWh/day) ^a	Days/Year	Electricity Demand (kWh/yr)	Electricity Demand (MWh/yr)
Total	98	5	4.4	365	8,030	8.03

Notes:

a. Estimated based on reference sources listed below.

Electricity Emission Factor (MT CO2/MWh)	Electricity Emission Factor (lbs CO2/MWh)	Total EV Charging GHG Emissions Per Year
0.20	438.02	
(MT CH4/MWh)	(lbs CH4/MWh)	
1.32E-05	0.029	
(MT N2O/MWh)	(lbs N2O/MWh)	
2.80E-06	0.00617	

Sources:

US Department of Energy. Alternative Fuels Data Center, 2016. Hybrid and Plug-In Electric Vehicle Emissions Data Sources and Assumptions.

Available at: https://www.afdc.energy.gov/vehicles/electric_emissions_sources.html.

US Department of Energy. Smith, Margaret, 2016. Level 1 Electric Vehicle Charging Stations at the Workplace.

Available at: https://www.afdc.energy.gov/uploads/publication/WPCC_L1ChargingAtTheWorkplace_0716.pdf.

UCLA Luskin Center for Innovation. Williams, Brett and JR deShazo, 2013. Pricing Workplace Charging: Financial Viability and Fueling Costs.

Available at: <http://luskin.ucla.edu/sites/default/files/Luskin-WPC-TRB-13-11-15d.pdf>.

2019 Calgreen Building Standards Code, Title 24 Part 11

Available: https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT18LOBEBUGSTCO_CH18.47GRBUSTCO_18.47.050AMCASE5.106.5.3.3TA5.106.5.3.WNOEVCHSPCHSTCA

A-2 CalEEMod Outputs

Paseo Norte Project Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Paseo Norte Project
Construction Start Date	1/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	3.40
Location	1275 Main St, Ramona, CA 92065, USA
County	San Diego
City	Unincorporated
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6112
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.18

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

Medical Office Building	5.00	1000sqft	0.11	5,000	0.00	0.00	—	—
Parking Lot	98.0	Space	0.88	0.00	0.00	0.00	—	—
City Park	4.39	Acre	4.39	0.00	4.39	4.39	—	—
Health Club	1.80	1000sqft	0.04	1,800	890	0.00	—	—
Apartments Mid Rise	100	Dwelling Unit	2.43	75,700	0.00	0.00	279	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.75	21.5	25.9	0.04	0.96	0.00	0.96	0.88	0.00	0.88	—	4,043	4,043	0.16	0.03	0.00	4,057
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.75	24.0	28.3	0.05	0.96	7.67	8.61	0.88	3.94	4.78	—	5,296	5,296	0.21	0.04	0.00	5,314
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.98	15.2	18.4	0.03	0.67	0.76	1.23	0.61	0.38	0.81	—	2,902	2,902	0.12	0.02	0.00	2,912
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.36	2.78	3.36	0.01	0.12	0.14	0.22	0.11	0.07	0.15	—	480	480	0.02	< 0.005	0.00	482

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.44	11.8	14.3	0.02	0.50	0.00	0.50	0.46	0.00	0.46	—	2,398	2,398	0.10	0.02	0.00	2,406
2025	4.75	21.5	25.9	0.04	0.96	0.00	0.96	0.88	0.00	0.88	—	4,043	4,043	0.16	0.03	0.00	4,057
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.90	24.0	28.3	0.05	0.94	7.67	8.61	0.84	3.94	4.78	—	5,296	5,296	0.21	0.04	0.00	5,314
2025	4.75	21.5	25.9	0.04	0.96	0.00	0.96	0.88	0.00	0.88	—	4,043	4,043	0.16	0.03	0.00	4,057
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.42	11.2	13.6	0.02	0.47	0.76	1.23	0.43	0.38	0.81	—	2,317	2,317	0.09	0.02	0.00	2,325
2025	1.98	15.2	18.4	0.03	0.67	0.00	0.67	0.61	0.00	0.61	—	2,902	2,902	0.12	0.02	0.00	2,912
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.08	2.05	2.48	< 0.005	0.09	0.14	0.22	0.08	0.07	0.15	—	384	384	0.02	< 0.005	0.00	385
2025	0.36	2.78	3.36	0.01	0.12	0.00	0.12	0.11	0.00	0.11	—	480	480	0.02	< 0.005	0.00	482

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.08	2.48	28.6	0.06	0.07	4.69	4.75	0.06	1.19	1.25	82.8	6,501	6,584	8.61	0.23	21.2	6,888

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.47	2.63	21.0	0.05	0.06	4.69	4.75	0.06	1.19	1.25	82.8	6,233	6,316	8.62	0.24	1.21	6,604	
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Unmit.	4.72	2.64	24.0	0.05	0.06	4.68	4.74	0.06	1.19	1.25	82.8	6,279	6,362	8.62	0.24	9.54	6,658	
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Unmit.	0.86	0.48	4.37	0.01	0.01	0.85	0.87	0.01	0.22	0.23	13.7	1,040	1,053	1.43	0.04	1.58	1,102	

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.60	2.18	22.5	0.05	0.04	4.69	4.73	0.04	1.19	1.23	—	5,582	5,582	0.24	0.20	20.5	5,669
Area	2.47	0.06	5.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.4	16.4	< 0.005	< 0.005	—	16.4
Energy	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	868	868	0.07	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9
Waste	—	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	5.08	2.48	28.6	0.06	0.07	4.69	4.75	0.06	1.19	1.25	82.8	6,501	6,584	8.61	0.23	21.2	6,888
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.55	2.39	20.8	0.05	0.04	4.69	4.73	0.04	1.19	1.23	—	5,331	5,331	0.25	0.21	0.53	5,402
Area	1.91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	868	868	0.07	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9	
Waste	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261	
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	4.47	2.63	21.0	0.05	0.06	4.69	4.75	0.06	1.19	1.25	82.8	6,233	6,316	8.62	0.24	1.21	6,604
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.52	2.37	20.9	0.05	0.04	4.68	4.72	0.04	1.19	1.23	—	5,369	5,369	0.25	0.21	8.86	5,447
Area	2.19	0.03	2.94	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.08	8.08	< 0.005	< 0.005	—	8.11
Energy	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	868	868	0.07	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9	
Waste	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261	
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	4.72	2.64	24.0	0.05	0.06	4.68	4.74	0.06	1.19	1.25	82.8	6,279	6,362	8.62	0.24	9.54	6,658
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.46	0.43	3.81	0.01	0.01	0.85	0.86	0.01	0.22	0.22	—	889	889	0.04	0.04	1.47	902
Area	0.40	0.01	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.34
Energy	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	144	144	0.01	< 0.005	—	144
Water	—	—	—	—	—	—	—	—	—	1.35	5.76	7.11	0.14	< 0.005	—	11.6	
Waste	—	—	—	—	—	—	—	—	—	12.4	0.00	12.4	1.24	0.00	—	43.3	
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.86	0.48	4.37	0.01	0.01	0.85	0.87	0.01	0.22	0.23	13.7	1,040	1,053	1.43	0.04	1.58	1,102

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

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

Location	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	0.90	24.0	28.3	0.05	0.94	—	0.94	0.84	—	0.84	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.78	2.09	< 0.005	0.07	—	0.07	0.06	—	0.06	—	392	392	0.02	< 0.005	—	393
Dust From Material Movement	—	—	—	—	—	0.57	0.57	—	0.29	0.29	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.32	0.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	64.9	64.9	< 0.005	< 0.005	—	65.1
Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	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	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—

3.3. Grading (2024) - Unmitigated

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

Location	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	0.53	14.1	17.8	0.03	0.60	—	0.60	0.54	—	0.54	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.97	1.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	203	203	0.01	< 0.005	—	203
Dust From Material Movement	—	—	—	—	—	0.19	0.19	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.18	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	33.5	33.5	< 0.005	< 0.005	—	33.7
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.02	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	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

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	—
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	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—

3.5. Building Construction (2024) - Unmitigated

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

Location	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	0.44	11.8	14.3	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	11.8	14.3	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	8.49	10.3	0.02	0.36	—	0.36	0.33	—	0.33	—	1,723	1,723	0.07	0.01	—	—	1,729	
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	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.06	1.55	1.88	< 0.005	0.07	—	0.07	0.06	—	0.06	—	285	285	0.01	< 0.005	—	—	286	
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	—	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	
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	—	
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	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	
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	—	
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	—	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	
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	—	
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	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—

3.7. 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	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	0.44	11.8	14.3	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	11.8	14.3	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	9.27	11.2	0.02	0.40	—	0.40	0.36	—	0.36	—	1,881	1,881	0.08	0.02	—	1,887
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.69	2.05	< 0.005	0.07	—	0.07	0.07	—	0.07	—	311	311	0.01	< 0.005	—	312
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—

3.9. Paving (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	cc2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	8.62	10.6	0.01	0.39	—	0.39	0.36	—	0.36	—	1,511	1,511	0.06	0.01	—	1,517
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	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.62	10.6	0.01	0.39	—	0.39	0.36	—	0.36	—	1,511	1,511	0.06	0.01	—	1,517
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	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	5.55	6.82	0.01	0.25	—	0.25	0.23	—	0.23	—	973	973	0.04	0.01	—	976
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.01	1.25	< 0.005	0.05	—	0.05	0.04	—	0.04	—	161	161	0.01	< 0.005	—	162
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—

3.11. 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	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	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	—	134	
Architectural Coatings	3.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.02	0.39	0.35	< 0.005	0.02	—	0.02	0.02	—	0.02	—	47.9	47.9	< 0.005	< 0.005	—	48.1	
Architectural Coatings	1.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
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	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	< 0.005	0.07	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.93	7.93	< 0.005	< 0.005	—	7.96	
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—

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	—
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	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
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	—
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	—

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Medical Office Building	0.78	0.54	5.44	0.01	0.01	1.06	1.07	0.01	0.27	0.28	—	1,273	1,273	0.06	0.05	4.64	1,294
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
City Park	0.01	0.01	0.10	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	23.2	23.2	< 0.005	< 0.005	0.08	23.6
Health Club	0.22	0.15	1.50	< 0.005	< 0.005	0.29	0.30	< 0.005	0.07	0.08	—	351	351	0.02	0.01	1.28	357
Apartments Mid Rise	1.59	1.49	15.5	0.04	0.03	3.32	3.35	0.03	0.84	0.87	—	3,935	3,935	0.16	0.14	14.5	3,994
Total	2.60	2.18	22.5	0.05	0.04	4.69	4.73	0.04	1.19	1.23	—	5,582	5,582	0.24	0.20	20.5	5,669
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.76	0.59	5.16	0.01	0.01	1.06	1.07	0.01	0.27	0.28	—	1,216	1,216	0.07	0.05	0.12	1,234
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
City Park	0.01	0.01	0.09	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	22.2	22.2	< 0.005	< 0.005	< 0.005	22.5
Health Club	0.21	0.16	1.43	< 0.005	< 0.005	0.29	0.30	< 0.005	0.07	0.08	—	336	336	0.02	0.01	0.03	340
Apartments Mid Rise	1.56	1.63	14.2	0.04	0.03	3.32	3.35	0.03	0.84	0.87	—	3,757	3,757	0.16	0.15	0.38	3,805
Total	2.55	2.39	20.8	0.05	0.04	4.69	4.73	0.04	1.19	1.23	—	5,331	5,331	0.25	0.21	0.53	5,402
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.14	0.11	0.94	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	203	203	0.01	0.01	0.33	206
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
City Park	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.69	3.69	< 0.005	< 0.005	0.01	3.75

Health Club	0.04	0.03	0.26	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	56.0	56.0	< 0.005	< 0.005	0.09	56.8
Apartments Mid Rise	0.28	0.29	2.60	0.01	0.01	0.60	0.61	0.01	0.15	0.16	—	626	626	0.03	0.02	1.04	635
Total	0.46	0.43	3.81	0.01	0.01	0.85	0.86	0.01	0.22	0.22	—	889	889	0.04	0.04	1.47	902

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	99.6	99.6	0.01	< 0.005	—	100	
Parking Lot	—	—	—	—	—	—	—	—	—	—	40.3	40.3	< 0.005	< 0.005	—	40.5	
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
Health Club	—	—	—	—	—	—	—	—	—	—	19.4	19.4	< 0.005	< 0.005	—	19.5	
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	407	407	0.03	< 0.005	—	409	
Total	—	—	—	—	—	—	—	—	—	—	566	566	0.04	0.01	—	569	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Medical Office Building	—	—	—	—	—	—	—	—	—	—	99.6	99.6	0.01	< 0.005	—	100	

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	40.3	40.3	< 0.005	< 0.005	—	40.5
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	19.4	19.4	< 0.005	< 0.005	—	19.5
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	407	407	0.03	< 0.005	—	409
Total	—	—	—	—	—	—	—	—	—	—	—	566	566	0.04	0.01	—	569
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	16.5	16.5	< 0.005	< 0.005	—	16.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	6.67	6.67	< 0.005	< 0.005	—	6.70
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	3.21	3.21	< 0.005	< 0.005	—	3.22
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	67.4	67.4	0.01	< 0.005	—	67.7
Total	—	—	—	—	—	—	—	—	—	—	—	93.7	93.7	0.01	< 0.005	—	94.2

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	51.3	51.3	< 0.005	< 0.005	—	51.5

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
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Health Club	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.3	
Apartments Mid Rise	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	227	227	0.02	< 0.005	—	227	
Total	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	301	301	0.03	< 0.005	—	302	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Medical Office Building	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	51.3	51.3	< 0.005	< 0.005	—	51.5	
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
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Health Club	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.3	
Apartments Mid Rise	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	227	227	0.02	< 0.005	—	227	
Total	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	301	301	0.03	< 0.005	—	302	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Medical Office Building	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.50	8.50	< 0.005	< 0.005	—	8.52	
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
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Health Club	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.86	3.86	< 0.005	< 0.005	—	3.87	

Apartmen Mid Rise	< 0.005	0.03	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.6	37.6	< 0.005	< 0.005	—	37.7
Total	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	49.9	49.9	< 0.005	< 0.005	—	50.0

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipme nt	0.56	0.06	5.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.4	16.4	< 0.005	< 0.005	—	16.4
Total	2.47	0.06	5.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.4	16.4	< 0.005	< 0.005	—	16.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscaping Equipment	0.05	0.01	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.34		
Total	0.40	0.01	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.34		

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	1.20	5.13	6.33	0.12	< 0.005	—	10.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Health Club	—	—	—	—	—	—	—	—	—	—	0.20	0.95	1.16	0.02	< 0.005	—	1.83
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	6.73	28.7	35.4	0.69	0.02	—	57.7
Total	—	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	1.20	5.13	6.33	0.12	< 0.005	—	10.3			
Parking Lot	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00			
City Park	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005			
Health Club	—	—	—	—	—	—	—	—	—	0.20	0.95	1.16	0.02	< 0.005	—	1.83			
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	6.73	28.7	35.4	0.69	0.02	—	57.7			
Total	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9			
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	0.20	0.85	1.05	0.02	< 0.005	—	1.71			
Parking Lot	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00			
City Park	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005			
Health Club	—	—	—	—	—	—	—	—	—	0.03	0.16	0.19	< 0.005	< 0.005	—	0.30			
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	1.11	4.75	5.87	0.11	< 0.005	—	9.55			
Total	—	—	—	—	—	—	—	—	—	1.35	5.76	7.11	0.14	< 0.005	—	11.6			

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.91	0.00	—	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.20	0.00	0.20	0.02	0.00	—	0.71
Health Club	—	—	—	—	—	—	—	—	—	—	5.53	0.00	5.53	0.55	0.00	—	19.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	39.9	0.00	39.9	3.98	0.00	—	139
Total	—	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.91	0.00	—	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.20	0.00	0.20	0.02	0.00	—	0.71
Health Club	—	—	—	—	—	—	—	—	—	—	5.53	0.00	5.53	0.55	0.00	—	19.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	39.9	0.00	39.9	3.98	0.00	—	139
Total	—	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Medical Office Building	—	—	—	—	—	—	—	—	—	—	4.82	0.00	4.82	0.48	0.00	—	16.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.03	0.00	0.03	< 0.005	0.00	—	0.12
Health Club	—	—	—	—	—	—	—	—	—	—	0.92	0.00	0.92	0.09	0.00	—	3.20
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	6.60	0.00	6.60	0.66	0.00	—	23.1
Total	—	—	—	—	—	—	—	—	—	—	12.4	0.00	12.4	1.24	0.00	—	43.3

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13	
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01	
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02	
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005	
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11	

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)

Equipme nt Type	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	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	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	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	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	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
Site Preparation	Site Preparation	1/1/2024	1/31/2024	6.00	27.0	—
Grading	Grading	2/1/2024	2/29/2024	6.00	25.0	—
Building Construction	Building Construction	3/1/2024	11/30/2025	6.00	548	—

Paving	Paving	3/1/2025	11/30/2025	6.00	235	—
Architectural Coating	Architectural Coating	7/1/2025	11/30/2025	6.00	131	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 3	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 3	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 3	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 3	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Tier 3	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Tier 3	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 3	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Tier 3	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Tier 3	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Tier 3	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 3	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 3	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 3	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	0.00	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	0.00	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	153,293	51,098	10,200	3,400	2,300

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	20.3	0.00	—
Grading	500	5,500	12.5	0.00	—
Paving	0.00	0.00	0.00	0.00	0.88

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Medical Office Building	0.00	0%
Parking Lot	0.88	100%

City Park	0.00	0%
Health Club	0.00	0%
Apartments Mid Rise	—	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	460	0.03	< 0.005
2025	0.00	438	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
Medical Office Building	188	188	188	68,620	1,502	1,502	1,502	548,072
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	3.42	3.42	3.42	1,250	27.3	27.3	27.3	9,982
Health Club	51.9	51.9	51.9	18,935	414	414	414	151,233
Apartments Mid Rise	324	324	324	118,260	4,695	4,695	4,695	1,713,622

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)
153292.5	51,098	10,200	3,400	2,300

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBtu/yr)
Medical Office Building	82,973	438	0.0330	0.0040	160,115
Parking Lot	33,580	438	0.0330	0.0040	0.00
City Park	0.00	438	0.0330	0.0040	0.00
Health Club	16,152	438	0.0330	0.0040	72,656
Apartments Mid Rise	339,087	438	0.0330	0.0040	707,844

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Medical Office Building	627,403	0.00
Parking Lot	0.00	0.00
City Park	0.00	146

Health Club	106,458	13,300
Apartments Mid Rise	3,513,307	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Medical Office Building	54.0	—
Parking Lot	0.00	—
City Park	0.38	—
Health Club	10.3	—
Apartments Mid Rise	73.9	—

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
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

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

Equipment Type	Fuel Type
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5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	23.0	annual days of extreme heat
Extreme Precipitation	6.25	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	20.1	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 $\frac{3}{4}$ 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	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	70.5
AQ-PM	8.95
AQ-DPM	15.0
Drinking Water	9.19
Lead Risk Housing	43.6
Pesticides	30.9
Toxic Releases	7.66
Traffic	18.6
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	74.7

Impaired Water Bodies	0.00
Solid Waste	83.3
Sensitive Population	—
Asthma	17.3
Cardio-vascular	48.5
Low Birth Weights	89.8
Socioeconomic Factor Indicators	—
Education	51.0
Housing	39.7
Linguistic	31.3
Poverty	44.9
Unemployment	25.2

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	42.28153471
Employed	45.27139741
Median HI	36.03233671
Education	—
Bachelor's or higher	29.0645451
High school enrollment	4.658026434
Preschool enrollment	29.56499423
Transportation	—
Auto Access	27.46054151
Active commuting	51.64891569

Social	—
2-parent households	53.18875914
Voting	65.85397151
Neighborhood	—
Alcohol availability	34.18452457
Park access	18.46528936
Retail density	35.95534454
Supermarket access	64.51944052
Tree canopy	6.210701912
Housing	—
Homeownership	43.80854613
Housing habitability	40.54921083
Low-inc homeowner severe housing cost burden	61.01629668
Low-inc renter severe housing cost burden	46.47760811
Uncrowded housing	25.1764404
Health Outcomes	—
Insured adults	41.04965995
Arthritis	0.0
Asthma ER Admissions	83.2
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	33.4
Cognitively Disabled	64.4

Physically Disabled	26.6
Heart Attack ER Admissions	59.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	43.7
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	8.3
SLR Inundation Area	0.0
Children	14.1
Elderly	61.9
English Speaking	52.0
Foreign-born	29.7
Outdoor Workers	20.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.1
Traffic Density	8.4
Traffic Access	23.0
Other Indices	—
Hardship	67.8
Other Decision Support	—

2016 Voting

68.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	32.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Construction Data Updates please see Project Assumptions updated 9.5.2023
Construction: Construction Phases	Project Assumptions 8.30.2023
Construction: Dust From Material Movement	Project Assumptions 8.30.2023
Construction: Trips and VMT	Mobile Emissions calculated outside of caleemod
Operations: Vehicle Data	Trip Generation 9.1.2023
Operations: Hearths	no woodstoves or fireplaces

Characteristics: Utility Information	SDG&E CO2 intensity factor
Construction: Off-Road Equipment	Project Assumption 8.30.2023
Construction: Electricity	CO2 Intensity Factors updated

A-3 Construction Mobile Emissions

Paseo Norte Project

Paseo Norte Project

Total Emissions

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (pounds/day)										(MT/yr)
						ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5	
<u>Site Preparation</u>	2024															
Total Haul Trips	0															0.00
Hauling	0	27	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	27	8	7.63	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	18	27	8	11.97	0	0.06	0.05	0.63	0.00	0.15	0.00	0.15	0.04	0.00	0.04	1.91
						0.06	0.05	0.63	0.00	0.15	0.00	0.15	0.04	0.00	0.04	1.91
<u>Grading</u>	2024															
Total Haul Trips	858															
Hauling	35	25	8	20	15	0.12	4.40	2.29	0.03	0.64	0.04	0.69	0.17	0.04	0.21	32.60
Vendor	0	25	8	7.63	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	20	25	8	11.97	0	0.07	0.05	0.70	0.00	0.17	0.00	0.17	0.04	0.00	0.04	1.97
						0.19	4.46	2.99	0.03	0.81	0.04	0.85	0.21	0.04	0.25	34.56
<u>Building Construction</u>	2024															
Total Haul Trips	0															
Hauling	0	262	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	52	262	8	7.63	6.9	0.08	2.43	1.38	0.01	0.34	0.02	0.36	0.09	0.02	0.11	177.05
Worker	230	262	8	11.97	0	0.75	0.63	8.03	0.02	1.92	0.01	1.93	0.48	0.01	0.49	236.85
						0.83	3.06	9.41	0.03	2.26	0.03	2.29	0.57	0.03	0.59	413.90
<u>Building Construction</u>	2025															
Total Haul Trips	0															
Hauling	0	286	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	52	286	8	7.63	6.9	0.08	2.31	1.34	0.01	0.34	0.02	0.36	0.09	0.02	0.11	189.89
Worker	230	286	8	11.97	0	0.71	0.58	7.53	0.02	1.92	0.01	1.93	0.48	0.01	0.49	251.64
						0.79	2.89	8.87	0.03	2.26	0.03	2.28	0.56	0.03	0.59	441.53
<u>Paving</u>	2025															
Total Haul Trips	0															
Hauling	0	235	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	2	235	8	7.63	6.9	0.00	0.09	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	6.00
Worker	16	235	8	11.97	0	0.05	0.04	0.52	0.00	0.13	0.00	0.13	0.03	0.00	0.03	14.38
						0.05	0.13	0.58	0.00	0.15	0.00	0.15	0.04	0.00	0.04	20.38
<u>Architectural Coating</u>	2025															
Total Haul Trips	0															
Hauling	0	131	8	20	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	10	131	8	7.63	6.9	0.02	0.44	0.26	0.00	0.07	0.00	0.07	0.02	0.00	0.02	16.73
Worker	46	131	8	11.97	0	0.14	0.12	1.51	0.00	0.38	0.00	0.39	0.10	0.00	0.10	23.05
						0.16	0.56	1.76	0.01	0.45	0.01	0.45	0.11	0.01	0.12	39.78

Paseo Norte Project
Running Emissions

		Running Emissions Factor (grams/mile)					Running Emissions Factor (grams/mile)			
		ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM2.5_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX
2021	2021Hauling Hauling	0.051266089	2.935664711	0.666567773	0.01562506	0.038960868	0.037270632	1698.587043	0.092514055	0.269827858
	2021Vendor Vendor	0.064541701	2.335022143	0.755908624	0.014006188	0.029215916	0.027943348	1501.130197	0.054760782	0.211634649
	2021Worker Worker	0.027078862	0.106646177	1.249326151	0.003380963	0.0021949	0.002020806	342.0333629	0.006238781	0.008351273
2022	2022Hauling Hauling	0.033958754	2.527202783	0.602061346	0.015402896	0.028514676	0.027276609	1677.135777	0.088821226	0.266537092
	2022Vendor Vendor	0.049112269	2.034734014	0.651182135	0.01385987	0.021985151	0.021025737	1486.959216	0.052352151	0.209284187
	2022Worker Worker	0.02440739	0.09599624	1.16000164	0.00330852	0.002091571	0.00192549	334.703345	0.005685579	0.007740796
2023	2023Hauling Hauling	0.02101607	2.064344771	0.568322282	0.015155266	0.027263543	0.026079843	1652.701769	0.084936215	0.262766526
	2023Vendor Vendor	0.034128162	1.62789636	0.567889917	0.013674764	0.019913656	0.019044111	1469.265323	0.050336859	0.206479287
	2023Worker Worker	0.021987927	0.086532496	1.077864941	0.003231482	0.001995197	0.001836563	326.9083508	0.005181016	0.007192839
2024	2024Hauling Hauling	0.019854196	1.96617346	0.5611759	0.014870846	0.02683352	0.025668663	1623.841979	0.080931531	0.258277788
	2024Vendor Vendor	0.030004363	1.526406376	0.517846278	0.013469086	0.018936084	0.018109087	1448.321347	0.047948461	0.20339394
	2024Worker Worker	0.019869458	0.078387481	1.006183346	0.003151256	0.001905637	0.001753914	318.7909553	0.004732168	0.006712615
2025	2025Hauling Hauling	0.018779891	1.867840635	0.555263886	0.014544988	0.02628813	0.025147075	1590.475739	0.076668217	0.25306857
	2025Vendor Vendor	0.026429194	1.424913518	0.477931244	0.013220209	0.017948665	0.017164589	1422.716997	0.045475108	0.199711699
	2025Worker Worker	0.018020068	0.071405746	0.942709545	0.003067961	0.001824982	0.001679522	310.3631528	0.004332143	0.006290656

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					Regional Emissions (MT/year)				
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Site Preparation	2024													
Total Haul Trips	0													
Hauling	0	27	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	27	8	7.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	18	27	8	11.97	0.01	0.04	0.48	0.00	0.00	0.00	1.85	0.00	0.01	1.87
Grading	2024													
Total Haul Trips	858													
Hauling	35	25	8	20	0.03	3.03	0.87	0.02	0.04	0.04	28.42	0.04	1.35	29.80
Vendor	0	25	8	7.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	20	25	8	11.97	0.01	0.04	0.53	0.00	0.00	0.00	1.91	0.00	0.01	1.92
Building Construction	2024													
Total Haul Trips	0													
Hauling	0	262	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	52	262	8	7.63	0.03	1.34	0.45	0.01	0.02	0.02	150.55	0.12	6.30	156.98
Worker	230	262	8	11.97	0.12	0.48	6.11	0.02	0.01	0.01	229.95	0.09	1.44	231.48
Building Construction	2025													
Total Haul Trips	0													
Hauling	0	286	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	52	286	8	7.63	0.02	1.25	0.42	0.01	0.02	0.02	161.44	0.13	6.75	168.32
Worker	230	286	8	11.97	0.11	0.43	5.72	0.02	0.01	0.01	244.38	0.09	1.48	245.94
Paving	2025													
Total Haul Trips	0													
Hauling	0	235	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	2	235	8	7.63	0.00	0.05	0.02	0.00	0.00	0.00	5.10	0.00	0.21	5.32
Worker	16	235	8	11.97	0.01	0.03	0.40	0.00	0.00	0.00	13.97	0.00	0.08	14.06
Architectural Coating	2025													
Total Haul Trips	0													
Hauling	0	131	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	10	131	8	7.63	0.00	0.24	0.08	0.00	0.00	0.00	14.22	0.01	0.59	14.83
Worker	46	131	8	11.97	0.02	0.09	1.14	0.00	0.00	0.00	22.39	0.01	0.14	22.53

Paseo Norte Project
Mitigated Start Emissions

			Start Emissions Factor (grams/trip)					Start Emissions Factor (grams/trip)		
			ROG_STREX	NOX_STREX	CO_STREX	SOx_STREX	PM10_STREX	PM2.5_STREX	CO2_STREX	CH4_STREX
			0.003090794	2.286356002	0.00721383	9.0325E-07	3.49324E-06	3.2119E-06	0.09136642	1.03282E-07
2021	2021Hauling	Hauling								
2021	2021Vendor	Vendor	0.125495038	1.716589936	0.89500443	6.61823E-05	9.81731E-05	9.02665E-05	6.69453996	0.00698252
2021	2021Worker	Worker	1.396640003	0.367537838	4.55429871	0.000816035	0.002632259	0.002420474	82.5443275	0.096702036
2022	2022Hauling	Hauling	0.00265067	2.471014107	0.00538445	6.92715E-07	2.55532E-06	2.34952E-06	0.07007012	1.16682E-07
2022	2022Vendor	Vendor	0.114265926	1.827922052	0.82987666	6.33194E-05	8.80848E-05	8.09907E-05	6.40494871	0.006648341
2022	2022Worker	Worker	1.348366338	0.345714272	4.27786761	0.0007972	0.002524402	0.002321231	80.6391186	0.091636402
2023	2023Hauling	Hauling	0.001554591	2.751871503	0.00494493	5.25782E-07	1.65347E-06	1.5203E-06	0.05318444	1.14134E-07
2023	2023Vendor	Vendor	0.103251201	2.024017084	0.77044791	6.0536E-05	7.8732E-05	7.23912E-05	6.12339607	0.006325351
2023	2023Worker	Worker	1.298435164	0.326009885	4.02127734	0.000777976	0.002424968	0.002229741	78.6945598	0.086786461
2024	2024Hauling	Hauling	0.00109432	2.792884832	0.00391151	4.02361E-07	1.10944E-06	1.02009E-06	0.04070005	9.38853E-08
2024	2024Vendor	Vendor	0.093077721	2.051785937	0.71385152	5.77266E-05	7.16872E-05	6.59137E-05	5.83921289	0.005975092
2024	2024Worker	Worker	1.242805519	0.308440088	3.78736708	0.000758557	0.002334305	0.002146323	76.730262	0.082144267
2025	2025Hauling	Hauling	0.000864138	2.81457263	0.00343315	3.34937E-07	8.52584E-07	7.8392E-07	0.0338799	9.03062E-08
2025	2025Vendor	Vendor	0.084375318	2.062756574	0.66106844	5.49531E-05	6.61868E-05	6.08563E-05	5.55867234	0.005631253
2025	2025Worker	Worker	1.193103436	0.292463392	3.57152769	0.000738966	0.002256972	0.002075202	74.7485943	0.077631984
										0.03373196

Construction Phase	One-Way Trips	Daily per Phase (days)	Haul Days per Day (hours/day)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					Regional Emissions (MT/year)				
						ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Site Preparation	2024														
Total Haul Trips	0														
Hauling	0	27	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	27	8	7.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	18	27	8	11.97	0.05	0.01	0.15	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04
Grading	2024														
Total Haul Trips	858														
Hauling	35	25	8	20	0.00	0.22	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.08
Vendor	0	25	8	7.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	20	25	8	11.97	0.05	0.01	0.17	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04
Building Construction	2024														
Total Haul Trips	0														
Hauling	0	262	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	52	262	8	7.63	0.01	0.24	0.08	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.10
Worker	230	262	8	11.97	0.63	0.16	1.92	0.00	0.00	0.00	4.62	0.00	0.00	0.00	5.37
Building Construction	2025														
Total Haul Trips	0														
Hauling	0	286	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	52	286	8	7.63	0.01	0.24	0.08	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.10
Worker	230	286	8	11.97	0.60	0.15	1.81	0.00	0.00	0.00	4.92	0.01	0.00	0.00	5.71
Paving	2025														
Total Haul Trips	0														
Hauling	0	235	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	2	235	8	7.63	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	235	8	11.97	0.04	0.01	0.13	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.33
Architectural Coating	2025														
Total Haul Trips	0														
Hauling	0	131	8	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	10	131	8	7.63	0.00	0.05	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
Worker	46	131	8	11.97	0.12	0.03	0.36	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.52

Paseo Norte Project Idling Emissions

Paseo Norte Project
Road Dust, Break Wear, and Tire wear Emissions

			Emission Factors (grams/mile)					
			PM10			PM2.5		
			RD	PM10_PMBW	PM10_PMTW	RD	PM2.5_PMBW	PM2.5_PMTW
2021	2021Hauling	Hauling	3.00E-01	0.084366331	0.035318242	7.36E-02	0.029528216	0.008829561
	2021Vendor	Vendor	0.299849906	0.064874924	0.023659123	0.073599522	0.022706223	0.005914781
	2021Worker	Worker	0.299849906	0.00812657	0.008000061	0.073599522	0.002844299	0.002000015
2022	2022Hauling	Hauling	0.299849906	0.083447638	0.035321323	0.073599522	0.029206673	0.008830331
	2022Vendor	Vendor	0.299849906	0.064415206	0.023660663	0.073599522	0.022545322	0.005915166
	2022Worker	Worker	0.299849906	0.008110551	0.008000006	0.073599522	0.002838693	0.002000015
2023	2023Hauling	Hauling	0.299849906	0.082381477	0.035325715	0.073599522	0.028833517	0.008831429
	2023Vendor	Vendor	0.299849906	0.06387974	0.023662859	0.073599522	0.022357909	0.005915715
	2023Worker	Worker	0.299849906	0.008091506	0.008000006	0.073599522	0.002832027	0.002000015
2024	2024Hauling	Hauling	0.299849906	0.082192912	0.035328605	0.073599522	0.028767519	0.008832151
	2024Vendor	Vendor	0.299849906	0.063748283	0.023664304	0.073599522	0.022311899	0.005916076
	2024Worker	Worker	0.299849906	0.008071166	0.008000006	0.073599522	0.002824908	0.002000015
2025	2025Hauling	Hauling	0.299849906	0.08207751	0.035331772	0.073599522	0.028727128	0.008832943
	2025Vendor	Vendor	0.299849906	0.0636208	0.023665888	0.073599522	0.02226728	0.005916472
	2025Worker	Worker	0.299849906	0.008048971	0.008000059	0.073599522	0.00281714	0.002000015

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					
					PM10			PM2.5		
					RD	BW	TW	RD	BW	TW
<u>Site Preparation</u>	2024				5.48	0.37	0.22	1.34	0.13	0.05
Total Haul Trips	0				0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0	27	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	27	8	7.63	0.00	0.00	0.00	0.00	0.00	0.00
Worker	18	27	8	11.97	0.14	0.00	0.00	0.03	0.00	0.00
<u>Grading</u>	2024									
Total Haul Trips	858									
Hauling	35	25	8	20	0.46	0.13	0.05	0.11	0.04	0.01
Vendor	0	25	8	7.63	0.00	0.00	0.00	0.00	0.00	0.00
Worker	20	25	8	11.97	0.16	0.00	0.00	0.04	0.00	0.00
<u>Building Construction</u>	2024									
Total Haul Trips	0									
Hauling	0	262	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	52	262	8	7.63	0.26	0.06	0.02	0.06	0.02	0.01
Worker	230	262	8	11.97	1.82	0.05	0.05	0.45	0.02	0.01
<u>Building Construction</u>	2025									
Total Haul Trips	0									
Hauling	0	286	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	52	286	8	7.63	0.26	0.06	0.02	0.06	0.02	0.01
Worker	230	286	8	11.97	1.82	0.05	0.05	0.45	0.02	0.01
<u>Paving</u>	2025									
Total Haul Trips	0									
Hauling	0	235	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	2	235	8	7.63	0.01	0.00	0.00	0.00	0.00	0.00
Worker	16	235	8	11.97	0.13	0.00	0.00	0.03	0.00	0.00
<u>Architectural Coating</u>	2025									
Total Haul Trips	0									
Hauling	0	131	8	20	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	10	131	8	7.63	0.05	0.01	0.00	0.01	0.00	0.00
Worker	46	131	8	11.97	0.36	0.01	0.01	0.09	0.00	0.00

Paseo Norte Project

Total On-Road Fuel Consumption

gal/mile	
2021	Hauling Hauling 0.17163556
2021	Vendor Vendor 0.14228491
2021	Worker Worker 0.04006185
2022	Hauling Hauling 0.17591158
2022	Vendor Vendor 0.14780042
2022	Worker Worker 0.04114232
2023	Hauling Hauling 0.17333356
2023	Vendor Vendor 0.14608795
2023	Worker Worker 0.04038967
2024	Hauling Hauling 0.17083642
2024	Vendor Vendor 0.14460093
2024	Worker Worker 0.03960362
2025	Hauling Hauling 0.16800737
2025	Vendor Vendor 0.14287634
2025	Worker Worker 0.03878523

Paseo Norte Project

Total On-Road Fuel Consumption

Source	Fuel Type	Total Fuel Use (gal)
Hauling	Diesel	2,990
Vendor	Diesel	33,185
Worker	Gasoline	64,125

Fuel Type	Total Fuel Use	Annual Fuel Use
Diesel	36,174	18,889
Gasoline	64,125	33,485

Duration of Construction	
Start	1/1/2024
End	11/30/2025
1.9	years

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (gallons)			
						gal/mile	gal/min	gal/day	Total Gallons/yr
<u>Site Preparation</u>	2022								
Total Haul Trips	0								
Hauling	0	27	8	20	15	0.18	0.00E+00	0	0
Vendor	0	27	8	7.63	6.9	0.15	0.00E+00	0	0
Worker	18	27	8	11.97	0	0.04	0.00E+00	9	239
<u>Grading</u>	2024								
Total Haul Trips	858								
Hauling	35	25	8	20	15	0.17	0.00E+00	120	2,990
Vendor	0	25	8	7.63	6.9	0.14	0.00E+00	0	0
Worker	20	25	8	11.97	0	0.04	0.00E+00	9	237
<u>Building Construction</u>	2024								
Total Haul Trips	0								
Hauling	0	262	8	20	15	0.17	0.00E+00	0	0
Vendor	52	262	8	7.63	6.9	0.14	0.00E+00	57	15,031
Worker	230	262	8	11.97	0	0.04	0.00E+00	109	28,567
<u>Building Construction</u>	2025								
Total Haul Trips	0								
Hauling	0	286	8	20	15	0.17	0.00E+00	0	0
Vendor	52	286	8	7.63	6.9	0.14	0.00E+00	57	16,213
Worker	230	286	8	11.97	0	0.04	0.00E+00	107	30,539
<u>Paving</u>	2025								
Total Haul Trips	0								
Hauling	0	235	8	20	15	0.17	0.00E+00	0	0
Vendor	2	235	8	7.63	6.9	0.14	0.00E+00	2	512
Worker	16	235	8	11.97	0	0.04	0.00E+00	7	1,746
<u>Architectural Coating</u>	2025								
Total Haul Trips	0								
Hauling	0	131	8	20	15	0.17	0.00E+00	0	0
Vendor	10	131	8	7.63	6.9	0.14	0.00E+00	11	1,428
Worker	46	131	8	11.97	0	0.04	0.00E+00	21	2,798

A-4 Air Quality Construction Emissions Summary

Paseo Norte Project
Air Quality Construction Analysis

Regional Emissions Summary	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
Source	lb/day					
Site Preparation - 2024	<1	24.0	28.9	<1	8.8	4.8
Grading - 2024	<1	18.6	20.8	<1	4.2	2.1
Building Construction - 2024	1.3	14.9	23.7	<1	2.8	1.1
Building Construction - 2025	1.2	14.7	23.2	<1	2.8	1.1
Paving - 2025	<1	8.7	11.2	<1	<1	<1
Architectural Coating - 2025	4.1	1.6	2.7	<1	<1	<1
Overlapping Phases						
Building Construction & Paving	1.7	23.6	34.9	<1	3.3	1.5
Building Construction & Paving & Architectural Coating	5.8	25.1	37.1	<1	3.8	1.6
Project Daily Maximum Emissions	5.8	25.1	37.1	<1	8.8	4.8
SDAPCD Regional Significance Threshold	137	250	550	250	100	50
Exceeds Thresholds?	No	No	No	No	No	No

Paseo Norte Project

Air Quality Construction Analysis

Regional Maximums	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM10	Fugitive PM10	Total PM2.5
Source	lb/day									
Site Preparation - 2024	1.0	24.0	28.9	0.1	0.9	7.8	8.8	0.8	4.0	4.8
Grading - 2024	0.7	18.6	20.8	0.1	0.6	3.6	4.2	0.6	1.6	2.1
Building Construction - 2024	1.3	14.9	23.7	0.1	0.5	2.3	2.8	0.5	0.6	1.1
Building Construction - 2025	1.2	14.7	23.2	0.1	0.5	2.3	2.8	0.5	0.6	1.1
Paving - 2025	0.4	8.7	11.2	0.0	0.4	0.1	0.5	0.4	0.0	0.4
Architectural Coating - 2025	4.1	1.6	2.7	0.0	0.1	0.4	0.5	0.1	0.1	0.2
Overlapping Phases	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM10	Fugitive PM10	Total PM2.5
Building Construction & Paving	1.7	23.6	34.9	0.1	0.9	2.4	3.3	0.9	0.6	1.5
Building Construction & Paving & Architectural Coating	5.8	25.1	37.1	0.1	1.0	2.9	3.8	0.9	0.7	1.6
Project Daily Maximum Emissions	5.8	25.1	37.1	0.1	1.0	7.8	8.8	0.9	4.0	4.8

Paseo Norte Project
Air Quality Construction Analysis

Summer	Onsite Emissions										Offsite Emissions									
	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
Source	lb/day										lb/day									
Site Preparation - 2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.05	0.63	0.00	0.00	0.15	0.15	0.00	0.04	0.04
Grading - 2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	4.46	2.99	0.03	0.04	0.81	0.85	0.04	0.21	0.25
Building Construction - 2024	0.44	11.80	14.30	0.02	0.50	0.00	0.50	0.46	0.00	0.46	0.83	3.06	9.41	0.03	0.03	2.26	2.29	0.03	0.57	0.59
Building Construction - 2025	0.44	11.80	14.30	0.02	0.50	0.00	0.50	0.46	0.00	0.46	0.79	2.89	8.87	0.03	0.03	2.26	2.28	0.03	0.56	0.59
Paving - 2025	0.33	8.62	10.60	0.01	0.39	0.00	0.39	0.36	0.00	0.36	0.05	0.13	0.58	0.00	0.00	0.15	0.15	0.00	0.04	0.04
Architectural Coating - 2025	3.99	1.09	0.96	0.00	0.07	0.00	0.07	0.06	0.00	0.06	0.16	0.56	1.76	0.01	0.01	0.45	0.45	0.01	0.11	0.12
Regional Emissions	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5	lb/day									
Site Preparation - 2024	0.06	0.05	0.63	0.00	0.00	0.15	0.15	0.00	0.04	0.04	0.19	4.46	2.99	0.03	0.04	0.81	0.85	0.04	0.21	0.25
Grading - 2024	0.19	4.46	2.99	0.03	0.04	0.81	0.85	0.04	0.21	0.25	1.27	14.86	23.71	0.05	0.53	2.26	2.79	0.49	0.57	1.05
Building Construction - 2024	1.27	14.86	23.71	0.05	0.53	2.26	2.79	0.49	0.57	1.05	1.23	14.69	23.17	0.05	0.53	2.26	2.78	0.49	0.56	1.05
Building Construction - 2025	1.23	14.69	23.17	0.05	0.53	2.26	2.78	0.49	0.56	1.05	0.38	8.75	11.18	0.01	0.39	0.15	0.54	0.36	0.04	0.40
Paving - 2025	0.38	8.75	11.18	0.01	0.39	0.15	0.54	0.36	0.04	0.40	4.15	1.65	2.72	0.01	0.08	0.45	0.52	0.07	0.11	0.18
Project Daily Maximum Emissions	4.15	14.86	23.71	0.05	0.53	2.26	2.79	0.49	0.57	1.05	lb/day									

Note: Offsite emissions pasted over from EMFAC2021 analysis

Paseo Norte Project
Air Quality Construction Analysis

Winter	Onsite Emissions									Offsite Emissions										
	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
Source	lb/day										lb/day									
Site Preparation - 2024	0.90	24.00	28.30	0.05	0.94	7.67	8.61	0.84	3.94	4.78	0.06	0.05	0.63	0.00	0.00	0.15	0.15	0.00	0.04	0.04
Grading - 2024	0.53	14.10	17.80	0.03	0.60	2.77	3.37	0.54	1.34	1.88	0.19	4.46	2.99	0.03	0.04	0.81	0.85	0.04	0.21	0.25
Building Construction - 2024	0.44	11.80	14.30	0.02	0.50	0.00	0.50	0.46	0.00	0.46	0.83	3.06	9.41	0.03	0.03	2.26	2.29	0.03	0.57	0.59
Building Construction - 2025	0.44	11.80	14.30	0.02	0.50	0.00	0.50	0.46	0.00	0.46	0.79	2.89	8.87	0.03	0.03	2.26	2.28	0.03	0.56	0.59
Paving - 2025	0.33	8.62	10.60	0.01	0.39	0.00	0.39	0.36	0.00	0.36	0.05	0.13	0.58	0.00	0.00	0.15	0.15	0.00	0.04	0.04
Architectural Coating - 2025	3.99	1.09	0.96	0.00	0.07	0.00	0.07	0.06	0.00	0.06	0.16	0.56	1.76	0.01	0.01	0.45	0.45	0.01	0.11	0.12
Regional Emissions	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5	<i>Note: Offsite emissions pasted over from EMFAC2021 analysis</i>									
Site Preparation - 2024	0.96	24.05	28.93	0.05	0.94	7.82	8.76	0.84	3.98	4.82										
Grading - 2024	0.72	18.56	20.79	0.06	0.64	3.58	4.22	0.58	1.55	2.13										
Building Construction - 2024	1.27	14.86	23.71	0.05	0.53	2.26	2.79	0.49	0.57	1.05										
Building Construction - 2025	1.23	14.69	23.17	0.05	0.53	2.26	2.78	0.49	0.56	1.05										
Paving - 2025	0.38	8.75	11.18	0.01	0.39	0.15	0.54	0.36	0.04	0.40										
Architectural Coating - 2025	4.15	1.65	2.72	0.01	0.08	0.45	0.52	0.07	0.11	0.18										
Project Daily Maximum Emissions	4.15	24.05	28.93	0.06	0.94	7.82	8.76	0.84	3.98	4.82										

A-5 Air Quality Operational Emissions Summary

Paseo Norte Apartment Project

Air Quality Assessment

Regional Operational Emissions

Appendix B

Health Risk Assessment

Ramona Intergenerational Community Campus Affordable Housing Project

Construction Modeling Assumptions

AERMOD Sources

<i>PolyArea</i>		
Offroad Exhaust		
Release Height	5	m
Emissions rate	1	g/s
Init Vert Dimension	1.4	m
		*optional, could vary
Offroad Idling		
Release Height	2.55	m
Emissions rate	1	g/s
Init Vert Dimension	2.37	m
		*optional, could vary

Variable Emissions 8 hours per day, 6 days per week

Ramona Intergenerational Community Campus Affordable Housing Project

Health Risk Assessment Exposure Duration Assumptions for Offroad Equipment and Haul Activities

OFFROAD

	Start Date	1/1/2024	4/1/2024
	End Date	3/31/2024	4/1/2026
	Days	90	730

Phase	Start Date	End Date	Hrs/Day	Duration (days)	3rd Tri	0<2
Site Preparation	2024	1/1/2024	1/31/2024	10	31	31
Grading	2024	2/1/2024	2/29/2024	10	29	29
Building Construction	2024	3/1/2024	12/31/2024	10	306	31
Building Construction	2025	1/1/2025	11/30/2025	10	334	0
Paving	2025	3/1/2025	11/30/2025	10	275	0
Architectural Coating	2025	7/1/2025	11/30/2025	10	153	0

Risk Factors

	Abbreviation	UOM	3rd Trimester	0<2	2<16	16<30
Daily Breathing Rate (95th %'ile)	DBR	L/kg-day	361	1090	572	261
Fraction Of Time At Home ^a	FAH	unitless	1	1	1	0.73
Exposure Frequency	EF	days/year	0.96	0.96	0.96	0.96
Age Sensitivity Factor	ASF	unitless	10	10	3	1
Inhalation Absorption Factor	A	unitless	1	1	1	1
Conversion Factor	CF ₁	m ³ /L	0.001	0.001	0.001	0.001
Conversion Factor	CF ₂	µg/m ³	0.001	0.001	0.001	0.001
Cancer Potency Factor (diesel exhaust)	CPF	mg/kg-day ⁻¹	1.1	1.1	1.1	1.1
Averaging Time (for residential exposure)	AT	years	70.00	70.00	70.00	70.00

^a assume school or daycare will have cancer risk of >1 per million

Intake Factor for Inhalation, IF (m³/kg-day)

Phase	Year	Equation	3rd Trimester	0<2
Site Preparation	2024		0.004	0.000
Grading	2024	DBR · FAH · EF · ED · ASF · A · CF ₁	0.004	0.000
Building Construction	2024		0.004	0.112
Building Construction	2025		0.000	0.137
Paving	2025		0.000	0.112
Architectural Coating	2025		0.000	0.063

Risk Calculation Part 1, R1

Equation	3rd Trimester	0<2
IF · CPF · CF ₂	4.62E-06	0.00E+00
	4.32E-06	0.00E+00
	4.62E-06	1.24E-04
	0.00E+00	1.50E-04
	0.00E+00	1.24E-04
	0.00E+00	6.88E-05

Ramona Intergenerational Community Campus Affordable Housing Project

Health Risk Assessment Exposure Duration Assumptions for Offroad Equipment and Haul Activities

HAUL

Start Date 1/1/2024 *End Date* 3/31/2024 *Days* 90 *4/1/2024*
4/1/2026

Phase	Start Date	End Date	Hrs/Day	Duration (days)	3rd Tri	0<2
Haul	2024	1/1/2024	12/31/2024	10	366	91
Haul	2025	1/1/2025	11/30/2025	10	334	0

Risk Factors

	Abbreviation	UOM	3rd Trimester	0<2	2<16	16<30
Daily Breathing Rate (95th %'ile)	DBR	L/kg-day	361	1090	572	261
Fraction Of Time At Home ^a	FAH	unitless	1	1	1	0.73
Exposure Frequency	EF	days/year	0.96	0.96	0.96	0.96
Age Sensitivity Factor	ASF	unitless	10	10	3	1
Inhalation Absorption Factor	A	unitless	1	1	1	1
Conversion Factor	CF ₁	m ³ /L	0.001	0.001	0.001	0.001
Conversion Factor	CF ₂	µg/m ³	0.001	0.001	0.001	0.001
Cancer Potency Factor (diesel exhaust)	CPF	mg/kg-day ⁻¹	1.1	1.1	1.1	1.1
Averaging Time (for residential exposure)	AT	years	70.00	70.00	70.00	70.00

^a assume school or daycare will have cancer risk of >1 per million

Intake Factor for Inhalation, IF (m³/kg-day)

Phase	Year	Equation	3rd Trimester	0<2
Haul	2024	DBR · FAH · EF · ED · ASF · A · CF ₁	0.012	0.112
Haul	2025	AT	0.000	0.137

Risk Calculation Part 1, R1

Equation	3rd Trimester	0<2
IF · CPF · CF ₂	1.36E-05	1.24E-04
	0.00E+00	1.50E-04

			Site Preparation	Grading	Building Construction	Building Construction	Paving	Architectural Coating	Child Risk			
Unique Identifier	X (UTM)	Y (UTM)	2024	2024	2024	2025	2025	2025	3rd Trimester	0<2	Total	per million
5121453655942	512145	3655942	0.005539861	0.003499953	0.002896802	0.002897067	0.002255115	0.000405552	5.41044E-08	1.10088E-06	1.15498E-06	1.1549827
5120653655953	512065	3655953	0.0087479	0.00526716	0.004574291	0.004574709	0.003561014	0.000640401	8.54354E-08	1.73838E-06	1.82381E-06	1.8238134
5120853655953	512085	3655953	0.00769589	0.004862081	0.004024193	0.004024561	0.003132771	0.000563387	7.51611E-08	1.52932E-06	1.60448E-06	1.6044841
5121053655953	512105	3655953	0.006804629	0.004299003	0.003558151	0.003558477	0.002769965	0.000498141	6.64567E-08	1.35221E-06	1.41867E-06	1.4186689
5121253655953	512125	3655953	0.006043086	0.003817879	0.003159939	0.003160228	0.002459963	0.000442392	5.90191E-08	1.20088E-06	1.2599E-06	1.259898
5121453655953	512145	3655953	0.005434858	0.003433614	0.002841896	0.002842155	0.002212371	0.000397865	5.30789E-08	1.08001E-06	1.13309E-06	1.133091
5120853655964	512085	3655964	0.007548894	0.004769212	0.003947328	0.003947689	0.003072933	0.000552626	7.37254E-08	1.50011E-06	1.57384E-06	1.5738375
5121053655964	512105	3655964	0.006657031	0.004205755	0.003480972	0.00348129	0.002709882	0.000487336	6.50152E-08	1.32288E-06	1.3879E-06	1.3878969
5121253655964	512125	3655964	0.005938814	0.003752002	0.003105415	0.003105699	0.002417517	0.000434758	5.80008E-08	1.18016E-06	1.23816E-06	1.2381586
5121453655964	512145	3655964	0.00531451	0.003357582	0.002778966	0.00277922	0.002163381	0.000389055	5.19036E-08	1.05611E-06	1.108E-06	1.1080002
5121653655964	512165	3655964	0.004835183	0.003054754	0.002528325	0.002528556	0.001968261	0.000353965	4.72223E-08	9.60845E-07	1.00807E-06	1.0080672
5121053655975	512105	3655975	0.006514462	0.004115683	0.003406423	0.003406734	0.002651847	0.000476899	6.36228E-08	1.29455E-06	1.35817E-06	1.3581732
5121253655975	512125	3655975	0.005805529	0.003667795	0.00303572	0.003035998	0.002363261	0.000425001	5.66991E-08	1.15367E-06	1.21037E-06	1.2103706
5121453655975	512145	3655975	0.005207659	0.003290075	0.002723093	0.002723342	0.002119885	0.000381233	5.086E-08	1.03486E-06	1.08572E-06	1.0857231
5121653655975	512165	3655975	0.004723689	0.002984315	0.002470024	0.00247025	0.001922875	0.000345803	4.61334E-08	9.38689E-07	9.84822E-07	9.848223
5121253655986	512125	3655986	0.005667172	0.003580385	0.002963373	0.002963644	0.00230694	0.000414872	5.53478E-08	1.12618E-06	1.18153E-06	1.1815251
5121453655986	512145	3655986	0.005068098	0.003201904	0.002650117	0.002650359	0.002063074	0.000371016	4.9497E-08	1.00713E-06	1.05663E-06	1.0566268
5121653655986	512165	3655986	0.004595605	0.002903394	0.002403049	0.002403269	0.001870736	0.000336427	4.48825E-08	9.13236E-07	9.58119E-07	9.581186
5121453655997	512145	3655997	0.00492669	0.003112566	0.002576174	0.002576409	0.002005511	0.000360664	4.8116E-08	9.79029E-07	1.02715E-06	1.0271451

Ramona Intergenerational Community Campus Affordable Housing Project

Onroad DPM Emissions, Ground Level Concentrations and Health Risk Calculations

Year	Duration (days)	Total lb/day DPM			Total g/s DPM			Offsite - Hauling (g/s)		Offsite - Vendor (g/s)		Offsite - Worker (g/s)		Offsite Onroad Total (g/s)	
		Hauling	Vendor	Worker	Hauling	Vendor	Worker	ARLN1	ARLN2	ARLN1	ARLN2	ARLN1	ARLN2	ARLN1	ARLN2
2024	365	0.0420447	0.017736173	0.01485651	0.00022073	9.31129E-05	7.7995E-05	2.0568E-06	2.824E-06	2.27429E-06	3.12222E-06	1.21432E-06	1.66706E-06	5.54541E-06	7.6129E-06
2025	365	0	0.020554121	0.01551566	0	0.000107907	8.14554E-05	0	0	2.63564E-06	3.61829E-06	1.2682E-06	1.74102E-06	3.90383E-06	5.3593E-06

Haul Truck/Worker Trip Adjustment Factor to Model

	One Way (miles)	
	ARLN1	ARLN2
Haul Distance (Haz Waste Facility or Landfill)	20	20
Vendor Distance	7.63	7.63
Worker Distance	11.97	11.97
AERMOD	0.37	0.51
% in Dispersion Model, Hauling	2%	3%
% in Dispersion Model, Vendor	5%	7%
% in Dispersion Model, Worker	3%	4%

Calculated in Lake AERMOD View

Number of Routes Modeled	
Path 1	Total
2	2

ARLN1 Predicted haul route to the south of the site

ARLN2 Predicted haul route to the north of the site

Ramona Intergenerational Community Campus Affordable Housing Project

Health Risk Assessment Results Summary

		Cancer Risk (per 10^6)	UTM X	UTM Y
	MAX	3.8	511945.00	3655876.00

Unique Identifier	X (UTM)	Y (UTM)	Offroad Risk (per million)	Onroad Risk (per million)	Total Risk (per million)
511203.153655653.07	511203.15	3655653.1	0.22060178	0.000444991	0.221046771
511223.153655653.07	511223.15	3655653.1	0.225001629	0.000458223	0.225459851
511243.153655653.07	511243.15	3655653.1	0.227017853	0.000468224	0.227486076
511263.153655653.07	511263.15	3655653.1	0.226982009	0.000475978	0.227457987
511283.153655653.07	511283.15	3655653.1	0.227214995	0.000486896	0.22770189
511303.153655653.07	511303.15	3655653.1	0.226659413	0.000498996	0.227158409
511323.153655653.07	511323.15	3655653.1	0.225602015	0.000513267	0.226115283
511343.153655653.07	511343.15	3655653.1	0.22375605	0.000529817	0.224285867
511363.153655653.07	511363.15	3655653.1	0.219490617	0.000544881	0.220035498
511383.153655653.07	511383.15	3655653.1	0.213854151	0.00056147	0.21441562
511403.153655653.07	511403.15	3655653.1	0.206138734	0.000577379	0.206716113
511423.153655653.07	511423.15	3655653.1	0.198548771	0.000601604	0.199150375
511203.153655673.07	511203.15	3655673.1	0.239706622	0.000469527	0.240176149
511223.153655673.07	511223.15	3655673.1	0.245047375	0.00048345	0.245530826
511243.153655673.07	511243.15	3655673.1	0.248389826	0.000494773	0.248884599
511263.153655673.07	511263.15	3655673.1	0.250146181	0.000504737	0.250650919
511283.153655673.07	511283.15	3655673.1	0.253174998	0.000520055	0.253695053
511303.153655673.07	511303.15	3655673.1	0.25418759	0.000533755	0.254721345
511323.153655673.07	511323.15	3655673.1	0.251965263	0.000543422	0.252508686
511343.153655673.07	511343.15	3655673.1	0.250827217	0.000559271	0.251386488
511363.153655673.07	511363.15	3655673.1	0.249823585	0.000580064	0.25040365
511383.153655673.07	511383.15	3655673.1	0.245549191	0.000598168	0.246147358
511403.153655673.07	511403.15	3655673.1	0.239043508	0.000616266	0.239659774
511203.153655693.07	511203.15	3655693.1	0.260245223	0.000491848	0.260737071
511223.153655693.07	511223.15	3655693.1	0.267163111	0.000507717	0.267670828
511243.153655693.07	511243.15	3655693.1	0.271688414	0.000520009	0.272208423
511263.153655693.07	511263.15	3655693.1	0.276464624	0.000534933	0.276999557
511283.153655693.07	511283.15	3655693.1	0.279878763	0.00054906	0.280427823
511303.153655693.07	511303.15	3655693.1	0.283382513	0.000566247	0.283948759
511323.153655693.07	511323.15	3655693.1	0.284395105	0.000580773	0.284975878
511343.153655693.07	511343.15	3655693.1	0.282746282	0.000593042	0.283339324
511363.153655693.07	511363.15	3655693.1	0.283561732	0.000615256	0.284176989
511383.153655693.07	511383.15	3655693.1	0.280622526	0.000633859	0.281256385
511403.153655693.07	511403.15	3655693.1	0.276742415	0.000656228	0.277398643
511423.153655693.07	511423.15	3655693.1	0.270801275	0.000680462	0.271481738

Unique Identifier	X (UTM)	Y (UTM)	Offroad Risk (per million)	Onroad Risk (per million)	Total Risk (per million)
511443.153655693.07	511443.15	3655693.1	0.261114439	0.00070214	0.26181658
511203.153655713.07	511203.15	3655713.1	0.284341339	0.000515019	0.284856358
511223.153655713.07	511223.15	3655713.1	0.292863245	0.000532605	0.293395851
511243.153655713.07	511243.15	3655713.1	0.299494382	0.000547803	0.300042185
511263.153655713.07	511263.15	3655713.1	0.306017986	0.000564698	0.306582684
511283.153655713.07	511283.15	3655713.1	0.310238615	0.000578274	0.31081689
511303.153655713.07	511303.15	3655713.1	0.314387556	0.000594365	0.314981921
511323.153655713.07	511323.15	3655713.1	0.317837539	0.000611833	0.318449373
511343.153655713.07	511343.15	3655713.1	0.319773114	0.000629366	0.32040248
511363.153655713.07	511363.15	3655713.1	0.320866356	0.000649061	0.321515416
511383.153655713.07	511383.15	3655713.1	0.32045415	0.000670244	0.321124394
511403.153655713.07	511403.15	3655713.1	0.320230125	0.000697813	0.320927938
511423.153655713.07	511423.15	3655713.1	0.316287287	0.000723589	0.317010876
511443.153655713.07	511443.15	3655713.1	0.310659782	0.000753806	0.311413588
511463.153655713.07	511463.15	3655713.1	0.300041003	0.00077997	0.300820973
511203.153655733.07	511203.15	3655733.1	0.311080949	0.000536172	0.311617121
511223.153655733.07	511223.15	3655733.1	0.321197912	0.000554621	0.321752533
511243.153655733.07	511243.15	3655733.1	0.329352418	0.000570622	0.32992304
511263.153655733.07	511263.15	3655733.1	0.337489002	0.000588375	0.338077377
511283.153655733.07	511283.15	3655733.1	0.346423114	0.000610253	0.347033367
511303.153655733.07	511303.15	3655733.1	0.351817633	0.000626058	0.352443691
511323.153655733.07	511323.15	3655733.1	0.355554368	0.000641093	0.356195461
511343.153655733.07	511343.15	3655733.1	0.36043811	0.000661977	0.361100087
511363.153655733.07	511363.15	3655733.1	0.364551207	0.000684902	0.365236109
511383.153655733.07	511383.15	3655733.1	0.367114052	0.000708925	0.367822977
511403.153655733.07	511403.15	3655733.1	0.367597946	0.000733706	0.368331652
511423.153655733.07	511423.15	3655733.1	0.368108722	0.000765262	0.368873984
511443.153655733.07	511443.15	3655733.1	0.365438346	0.000797675	0.366236021
511463.153655733.07	511463.15	3655733.1	0.359058117	0.000830966	0.359889083
511483.153655733.07	511483.15	3655733.1	0.353367885	0.000880211	0.354248096
511503.153655733.07	511503.15	3655733.1	0.340033924	0.000922118	0.340956043
511203.153655753.07	511203.15	3655753.1	0.342041187	0.000558337	0.342599524
511223.153655753.07	511223.15	3655753.1	0.351745945	0.000573025	0.35231897
511243.153655753.07	511243.15	3655753.1	0.361504469	0.000589045	0.362093514
511263.153655753.07	511263.15	3655753.1	0.371531822	0.000607146	0.372138969
511283.153655753.07	511283.15	3655753.1	0.382105797	0.000628196	0.382733993
511303.153655753.07	511303.15	3655753.1	0.391219129	0.000648573	0.391867702
511323.153655753.07	511323.15	3655753.1	0.399929216	0.00067072	0.400599936
511343.153655753.07	511343.15	3655753.1	0.406954637	0.000692335	0.407646971
511363.153655753.07	511363.15	3655753.1	0.414078628	0.000717554	0.414796182
511383.153655753.07	511383.15	3655753.1	0.419777821	0.000743849	0.42052167
511403.153655753.07	511403.15	3655753.1	0.425405326	0.000774872	0.426180198
511423.153655753.07	511423.15	3655753.1	0.426659865	0.000802578	0.427462443
511443.153655753.07	511443.15	3655753.1	0.428192195	0.000838217	0.429030412

Unique Identifier	X (UTM)	Y (UTM)	Offroad Risk (per million)	Onroad Risk (per million)	Total Risk (per million)
511463.153655753.07	511463.15	3655753.1	0.429581149	0.00088352	0.43046467
511483.153655753.07	511483.15	3655753.1	0.425978829	0.000929729	0.426908558
511503.153655753.07	511503.15	3655753.1	0.417752636	0.000979796	0.418732432
511523.153655753.07	511523.15	3655753.1	0.403065565	0.001036401	0.404101965
511203.153655773.07	511203.15	3655773.1	0.375483621	0.000579195	0.376062816
511223.153655773.07	511223.15	3655773.1	0.388064859	0.000595486	0.388660345
511243.153655773.07	511243.15	3655773.1	0.399812723	0.000611339	0.400424062
511263.153655773.07	511263.15	3655773.1	0.411524744	0.000628467	0.412153211
511283.153655773.07	511283.15	3655773.1	0.423559361	0.000647789	0.42420715
511303.153655773.07	511303.15	3655773.1	0.43562086	0.000669135	0.436289995
511323.153655773.07	511323.15	3655773.1	0.446167952	0.000690173	0.446858124
511343.153655773.07	511343.15	3655773.1	0.457888933	0.000715872	0.458604805
511363.153655773.07	511363.15	3655773.1	0.468212	0.000742214	0.468954214
511383.153655773.07	511383.15	3655773.1	0.480766354	0.000776125	0.481542479
511403.153655773.07	511403.15	3655773.1	0.490650332	0.000809541	0.491459873
511423.153655773.07	511423.15	3655773.1	0.498150685	0.000843627	0.498994312
511443.153655773.07	511443.15	3655773.1	0.505892985	0.000884846	0.506777831
511463.153655773.07	511463.15	3655773.1	0.513644246	0.00093826	0.514582505
511483.153655773.07	511483.15	3655773.1	0.514262554	0.000984056	0.51524661
511503.153655773.07	511503.15	3655773.1	0.510651273	0.001039338	0.511690611
511523.153655773.07	511523.15	3655773.1	0.499270809	0.00110815	0.500378959
511543.153655773.07	511543.15	3655773.1	0.480094279	0.001185963	0.481280242
511203.153655793.07	511203.15	3655793.1	0.399194415	0.000582816	0.399777231
511223.153655793.07	511223.15	3655793.1	0.425226106	0.000614759	0.425840864
511243.153655793.07	511243.15	3655793.1	0.439500971	0.000630476	0.440131447
511263.153655793.07	511263.15	3655793.1	0.45533505	0.000649569	0.455984618
511283.153655793.07	511283.15	3655793.1	0.472002501	0.000671263	0.472673764
511303.153655793.07	511303.15	3655793.1	0.488580342	0.000694557	0.489274899
511323.153655793.07	511323.15	3655793.1	0.501197423	0.00071375	0.501911173
511343.153655793.07	511343.15	3655793.1	0.517676693	0.000741258	0.518417951
511363.153655793.07	511363.15	3655793.1	0.531790261	0.00076795	0.532558211
511383.153655793.07	511383.15	3655793.1	0.549622641	0.000803477	0.550426118
511403.153655793.07	511403.15	3655793.1	0.567723852	0.00084347	0.568567321
511423.153655793.07	511423.15	3655793.1	0.581864302	0.000881467	0.582745769
511443.153655793.07	511443.15	3655793.1	0.594786057	0.000922889	0.595708946
511463.153655793.07	511463.15	3655793.1	0.609150532	0.000974218	0.610124751
511483.153655793.07	511483.15	3655793.1	0.619366067	0.001034986	0.620401053
511503.153655793.07	511503.15	3655793.1	0.623479164	0.00109612	0.624575283
511523.153655793.07	511523.15	3655793.1	0.618371397	0.001177844	0.619549241
511203.153655813.07	511203.15	3655813.1	0.427744145	0.0005947	0.428338845
511223.153655813.07	511223.15	3655813.1	0.448220019	0.000614367	0.448834386
511243.153655813.07	511243.15	3655813.1	0.476366505	0.000643936	0.477010441
511263.153655813.07	511263.15	3655813.1	0.499512756	0.00066799	0.500180746
511283.153655813.07	511283.15	3655813.1	0.521216286	0.000691094	0.52190738

Unique Identifier	X (UTM)	Y (UTM)	Offroad Risk (per million)	Onroad Risk (per million)	Total Risk (per million)
511303.153655813.07	511303.15	3655813.1	0.542901895	0.000715436	0.543617331
511323.153655813.07	511323.15	3655813.1	0.560823885	0.000736305	0.56156019
511343.153655813.07	511343.15	3655813.1	0.58382676	0.000765973	0.584592733
511363.153655813.07	511363.15	3655813.1	0.604849255	0.000795389	0.605644644
511383.153655813.07	511383.15	3655813.1	0.629276928	0.000832083	0.630109011
511403.153655813.07	511403.15	3655813.1	0.654224338	0.000872747	0.655097086
511423.153655813.07	511423.15	3655813.1	0.677146564	0.000914254	0.678060818
511443.153655813.07	511443.15	3655813.1	0.701583198	0.000962422	0.70254562
511463.153655813.07	511463.15	3655813.1	0.725804768	0.001016052	0.72682082
511483.153655813.07	511483.15	3655813.1	0.747373884	0.001078298	0.748452182
511503.153655813.07	511503.15	3655813.1	0.762213292	0.00115499	0.763368282
511543.153655813.07	511543.15	3655813.1	0.776389586	0.0013208	0.777710386
511563.153655813.07	511563.15	3655813.1	0.772133113	0.001415806	0.773548919
511203.153655833.07	511203.15	3655833.1	0.463184881	0.000616441	0.463801322
511223.153655833.07	511223.15	3655833.1	0.483723483	0.000632732	0.484356214
511243.153655833.07	511243.15	3655833.1	0.5063948	0.00065133	0.507046131
511263.153655833.07	511263.15	3655833.1	0.538385553	0.000680516	0.539066069
511283.153655833.07	511283.15	3655833.1	0.570313579	0.000710149	0.571023728
511303.153655833.07	511303.15	3655833.1	0.597832796	0.000735291	0.598568086
511323.153655833.07	511323.15	3655833.1	0.623147607	0.000758845	0.623906452
511343.153655833.07	511343.15	3655833.1	0.652862267	0.00078905	0.653651318
511363.153655833.07	511363.15	3655833.1	0.682657576	0.000821105	0.683478682
511383.153655833.07	511383.15	3655833.1	0.71375223	0.000856763	0.714608992
511403.153655833.07	511403.15	3655833.1	0.747347001	0.000897797	0.748244797
511423.153655833.07	511423.15	3655833.1	0.784355911	0.000945669	0.78530158
511443.153655833.07	511443.15	3655833.1	0.819438207	0.000994379	0.820432586
511463.153655833.07	511463.15	3655833.1	0.858194511	0.001051459	0.85924597
511483.153655833.07	511483.15	3655833.1	0.89933444	0.00112725	0.90046169
511203.153655853.07	511203.15	3655853.1	0.497828089	0.000639349	0.498467438
511223.153655853.07	511223.15	3655853.1	0.521270052	0.000655816	0.521925868
511243.153655853.07	511243.15	3655853.1	0.545581232	0.000672628	0.546253861
511263.153655853.07	511263.15	3655853.1	0.569919295	0.000689123	0.570608419
511283.153655853.07	511283.15	3655853.1	0.604947826	0.000716462	0.605664287
511303.153655853.07	511303.15	3655853.1	0.645111006	0.000748923	0.645859929
511323.153655853.07	511323.15	3655853.1	0.68773846	0.000784271	0.688522731
511343.153655853.07	511343.15	3655853.1	0.725831651	0.000815566	0.726647217
511363.153655853.07	511363.15	3655853.1	0.772007659	0.000856443	0.772864102
511383.153655853.07	511383.15	3655853.1	0.811579414	0.000891389	0.812470803
511403.153655853.07	511403.15	3655853.1	0.853382457	0.000930232	0.854312689
511423.153655853.07	511423.15	3655853.1	0.897909642	0.000973607	0.89888325
511443.153655853.07	511443.15	3655853.1	0.944677076	0.001021147	0.945698223
511463.153655853.07	511463.15	3655853.1	1.009250008	0.001088822	1.01033883
511483.153655853.07	511483.15	3655853.1	1.0725684	0.001162556	1.073730956
511503.153655853.07	511503.15	3655853.1	1.133323947	0.00123231	1.134556257

Unique Identifier	X (UTM)	Y (UTM)	Offroad Risk (per million)	Onroad Risk (per million)	Total Risk (per million)
511523.153655853.07	511523.15	3655853.1	1.196660262	0.001322569	1.19798283
511543.153655853.07	511543.15	3655853.1	1.262783445	0.001418919	1.264202364
511203.153655873.07	511203.15	3655873.1	0.528895859	0.000661452	0.529557311
511223.153655873.07	511223.15	3655873.1	0.55906753	0.000682289	0.559749819
511243.153655873.07	511243.15	3655873.1	0.586040126	0.000698741	0.586738867
511263.153655873.07	511263.15	3655873.1	0.612492984	0.000713788	0.613206772
511283.153655873.07	511283.15	3655873.1	0.646643336	0.000735612	0.647378948
511303.153655873.07	511303.15	3655873.1	0.684422892	0.000760213	0.685183105
511323.153655873.07	511323.15	3655873.1	0.729505659	0.000791049	0.730296709
511343.153655873.07	511343.15	3655873.1	0.78696356	0.000832814	0.787796374
511363.153655873.07	511363.15	3655873.1	0.858400614	0.000888133	0.859288748
511383.153655873.07	511383.15	3655873.1	0.909048159	0.000923449	0.909971608
511403.153655873.07	511403.15	3655873.1	0.961219073	0.000960718	0.962179791
511423.153655873.07	511423.15	3655873.1	1.019465542	0.001004238	1.02046978
511443.153655873.07	511443.15	3655873.1	1.085391584	0.001055048	1.086446632
511463.153655873.07	511463.15	3655873.1	1.164149771	0.001117074	1.165266845
511483.153655873.07	511483.15	3655873.1	1.252317003	0.001186879	1.253503881
511503.153655873.07	511503.15	3655873.1	1.336281528	0.001252622	1.33753415
511523.153655873.07	511523.15	3655873.1	1.442720229	0.001336203	1.444056432
511543.153655873.07	511543.15	3655873.1	1.568667017	0.001446707	1.570113723
511203.153655893.07	511203.15	3655893.1	0.564121532	0.000691347	0.564812878
511223.153655893.07	511223.15	3655893.1	0.58949907	0.000704937	0.590204007
511243.153655893.07	511243.15	3655893.1	0.619742429	0.000721984	0.620464413
511263.153655893.07	511263.15	3655893.1	0.653686679	0.000741135	0.654427814
511283.153655893.07	511283.15	3655893.1	0.690543252	0.000761492	0.691304744
511303.153655893.07	511303.15	3655893.1	0.736531079	0.000788651	0.737319731
511323.153655893.07	511323.15	3655893.1	0.783370201	0.000815054	0.784185255
511343.153655893.07	511343.15	3655893.1	0.834429952	0.000843915	0.835273867
511363.153655893.07	511363.15	3655893.1	0.905383112	0.000888084	0.906271196
511383.153655893.07	511383.15	3655893.1	0.998478891	0.000949353	0.999428245
511403.153655893.07	511403.15	3655893.1	1.066698948	0.000988832	1.06768778
511423.153655893.07	511423.15	3655893.1	1.134883161	0.001027776	1.135910936
511443.153655893.07	511443.15	3655893.1	1.213229142	0.001074101	1.214303243
511463.153655893.07	511463.15	3655893.1	1.299245735	0.001125141	1.300370876
511483.153655893.07	511483.15	3655893.1	1.43903726	0.001211804	1.440249064
511503.153655893.07	511503.15	3655893.1	1.530994993	0.001262449	1.532257442
511523.153655893.07	511523.15	3655893.1	1.678887258	0.001346599	1.680233856
511543.153655893.07	511543.15	3655893.1	1.883287559	0.001459092	1.88474665
511203.153655913.07	511203.15	3655913.1	0.596632022	0.000721647	0.597353669
511223.153655913.07	511223.15	3655913.1	0.625665647	0.000736777	0.626402424
511243.153655913.07	511243.15	3655913.1	0.654824725	0.000750353	0.655575078
511263.153655913.07	511263.15	3655913.1	0.695382189	0.000772639	0.696154828
511283.153655913.07	511283.15	3655913.1	0.73654004	0.000793272	0.737333312
511303.153655913.07	511303.15	3655913.1	0.784579936	0.000817623	0.785397559

Unique Identifier	X (UTM)	Y (UTM)	Offroad Risk (per million)	Onroad Risk (per million)	Total Risk (per million)
511323.153655913.07	511323.15	3655913.1	0.838202531	0.000844326	0.839046857
511343.153655913.07	511343.15	3655913.1	0.893886155	0.000870392	0.894756547
511363.153655913.07	511363.15	3655913.1	0.962276471	0.000904306	0.963180777
511383.153655913.07	511383.15	3655913.1	1.049108514	0.00094955	1.050058065
511403.153655913.07	511403.15	3655913.1	1.160278621	0.001009557	1.161288178
511423.153655913.07	511423.15	3655913.1	1.260363976	0.001058891	1.261422867
511443.153655913.07	511443.15	3655913.1	1.357348828	0.001103643	1.35845247
511463.153655913.07	511463.15	3655913.1	1.461574163	0.001150945	1.462725108
511483.153655913.07	511483.15	3655913.1	1.623597917	0.001229599	1.624827517
511503.153655913.07	511503.15	3655913.1	1.7383345	0.001275906	1.739610406
511523.153655913.07	511523.15	3655913.1	1.927752017	0.001357816	1.929109833
511543.153655913.07	511543.15	3655913.1	2.186034782	0.001464663	2.187499444
511203.153655933.07	511203.15	3655933.1	0.631624708	0.000757143	0.632381851
511223.153655933.07	511223.15	3655933.1	0.658310552	0.000767973	0.659078525
511243.153655933.07	511243.15	3655933.1	0.693464536	0.000784917	0.694249454
511263.153655933.07	511263.15	3655933.1	0.737964839	0.000807845	0.738772683
511283.153655933.07	511283.15	3655933.1	0.783092411	0.000828536	0.783920947
511303.153655933.07	511303.15	3655933.1	0.834098395	0.000851251	0.834949646
511323.153655933.07	511323.15	3655933.1	0.892918368	0.000877061	0.893795429
511343.153655933.07	511343.15	3655933.1	0.952204312	0.000899964	0.953104277
511363.153655933.07	511363.15	3655933.1	1.027861995	0.000931757	1.028793752
511383.153655933.07	511383.15	3655933.1	1.114900141	0.000967945	1.115868087
511403.153655933.07	511403.15	3655933.1	1.208497736	0.001005049	1.209502785
511423.153655933.07	511423.15	3655933.1	1.346506023	0.001066165	1.347572188
511443.153655933.07	511443.15	3655933.1	1.506361217	0.001135132	1.507496349
511463.153655933.07	511463.15	3655933.1	1.648168966	0.001187993	1.649356959
511483.153655933.07	511483.15	3655933.1	1.824619923	0.001254187	1.82587411
511503.153655933.07	511503.15	3655933.1	1.936865349	0.001283133	1.938148482
511523.153655933.07	511523.15	3655933.1	2.190542162	0.001372309	2.191914472
511543.153655933.07	511543.15	3655933.1	2.489068757	0.001468178	2.490536935
511203.153655953.07	511203.15	3655953.1	0.658857173	0.000787434	0.659644607
511223.153655953.07	511223.15	3655953.1	0.696806988	0.000806915	0.697613903
511243.153655953.07	511243.15	3655953.1	0.730455525	0.000820129	0.731275654
511263.153655953.07	511263.15	3655953.1	0.770851691	0.000836921	0.771688612
511283.153655953.07	511283.15	3655953.1	0.824743116	0.000862034	0.82560515
511303.153655953.07	511303.15	3655953.1	0.888912803	0.000891553	0.889804356
511323.153655953.07	511323.15	3655953.1	0.951684574	0.000915753	0.952600328
511343.153655953.07	511343.15	3655953.1	1.013013626	0.000934877	1.013948503
511363.153655953.07	511363.15	3655953.1	1.089343383	0.000960483	1.090303866
511383.153655953.07	511383.15	3655953.1	1.179526839	0.000990802	1.180517641
511403.153655953.07	511403.15	3655953.1	1.280911538	0.001023483	1.281935021
511423.153655953.07	511423.15	3655953.1	1.400979913	0.001062577	1.40204249
511443.153655953.07	511443.15	3655953.1	1.542715975	0.001108756	1.543824731
511463.153655953.07	511463.15	3655953.1	1.751991057	0.001183008	1.753174064

Unique Identifier	X (UTM)	Y (UTM)	Offroad Risk (per million)	Onroad Risk (per million)	Total Risk (per million)
511483.153655953.07	511483.15	3655953.1	1.941749091	0.001240139	1.94298923
511503.153655953.07	511503.15	3655953.1	2.135727755	0.00129286	2.137020615
511523.153655953.07	511523.15	3655953.1	2.415651323	0.001372068	2.417023391
511543.153655953.07	511543.15	3655953.1	2.725880977	0.001450858	2.727331835
5119653655832	511965	3655832	2.60615312	0.027646197	2.633799317
5119453655843	511945	3655843	3.063172837	0.031006202	3.094179039
5119653655843	511965	3655843	2.801655153	0.024379267	2.82603442
5119853655843	511985	3655843	2.55122222	0.01901676	2.570238979
5119453655854	511945	3655854	3.315747448	0.028472288	3.344219736
5119653655854	511965	3655854	2.996825629	0.021452215	3.018277843
5119853655854	511985	3655854	2.700324219	0.016846545	2.717170764
5120053655854	512005	3655854	2.428815025	0.014310993	2.443126018
5119453655865	511945	3655865	3.569549715	0.025309301	3.594859016
5119653655865	511965	3655865	3.185857823	0.018866057	3.20472388
5119853655865	511985	3655865	2.842185734	0.01497111	2.857156844
5120053655865	512005	3655865	2.535988528	0.012768648	2.548757175
5120253655865	512025	3655865	2.265312706	0.01167296	2.276985666
5119453655876	511945	3655876	3.822294585	0.022266959	3.844561545
5119653655876	511965	3655876	3.367864596	0.0166115	3.384476096
5119853655876	511985	3655876	2.97073121	0.013324428	2.984055639
5120053655876	512005	3655876	2.63073313	0.011431634	2.642164765
5120253655876	512025	3655876	2.330593557	0.010491296	2.341084853
5120453655876	512045	3655876	2.067597308	0.010295906	2.077893214
5119653655887	511965	3655887	3.535229104	0.014623238	3.549852342
5119853655887	511985	3655887	3.0862474	0.011855776	3.098103176
5120053655887	512005	3655887	2.708729632	0.010263103	2.718992736
5120253655887	512025	3655887	2.384010049	0.009442479	2.393452528
5120453655887	512045	3655887	2.104579335	0.009219842	2.113799177
5119853655898	511985	3655898	3.18403874	0.010542278	3.194581019
5120053655898	512005	3655898	2.771743351	0.009204943	2.780948294
5120253655898	512025	3655898	2.426422439	0.008486107	2.434908546
5120453655898	512045	3655898	2.1283887	0.008310272	2.136698971
5120653655898	512065	3655898	1.883153144	0.008413407	1.89156655
5120053655909	512005	3655909	2.819442728	0.008246785	2.827689513
5120253655909	512025	3655909	2.449505963	0.007664464	2.457170427
5120453655909	512045	3655909	2.140503965	0.007503811	2.148007776
5120653655909	512065	3655909	1.888547663	0.007554715	1.896102378
5120853655909	512085	3655909	1.674720395	0.007883163	1.682603558
5120053655920	512005	3655920	2.838054715	0.007400321	2.845455036
5120253655920	512025	3655920	2.459094228	0.006913358	2.466007586
5120453655920	512045	3655920	2.145441474	0.006734374	2.152175847
5120653655920	512065	3655920	1.885420275	0.006788529	1.892208805
5120853655920	512085	3655920	1.669415486	0.007018679	1.676434165
5121053655920	512105	3655920	1.482981981	0.007508223	1.490490204

Unique Identifier	X (UTM)	Y (UTM)	Offroad Risk (per million)	Onroad Risk (per million)	Total Risk (per million)
5120253655931	512025	3655931	2.455473986	0.006231536	2.461705521
5120453655931	512045	3655931	2.137645408	0.006067662	2.143713069
5120653655931	512065	3655931	1.87465812	0.006094769	1.880752889
5120853655931	512085	3655931	1.653572446	0.006320982	1.659893428
5121053655931	512105	3655931	1.466699852	0.006677713	1.473377565
5121253655931	512125	3655931	1.310348408	0.007160889	1.317509296
5120453655942	512045	3655942	2.118746669	0.005480156	2.124226825
5120653655942	512065	3655942	1.854988736	0.005489767	1.860478503
5120853655942	512085	3655942	1.63145671	0.005699487	1.637156197
5121053655942	512105	3655942	1.4449784	0.005968433	1.450946833
5121253655942	512125	3655942	1.284003082	0.006305377	1.290308458
5121453655942	512145	3655942	1.154982673	0.006824647	1.16180732
5120653655953	512065	3655953	1.823813433	0.004983929	1.828797362
5120853655953	512085	3655953	1.604484115	0.005125525	1.609609639
5121053655953	512105	3655953	1.418668918	0.005360852	1.42402977
5121253655953	512125	3655953	1.259898005	0.005591251	1.265489256
5121453655953	512145	3655953	1.133090961	0.005947401	1.139038363
5120853655964	512085	3655964	1.573837511	0.004597938	1.578435449
5121053655964	512105	3655964	1.38789686	0.004835571	1.392732431
5121253655964	512125	3655964	1.23815863	0.004988923	1.243147553
5121453655964	512145	3655964	1.108000175	0.005218415	1.11321859
5121653655964	512165	3655964	1.008067156	0.005545189	1.013612346
5121053655975	512105	3655975	1.358173239	0.004311637	1.362484876
5121253655975	512125	3655975	1.210370584	0.004475958	1.214846542
5121453655975	512145	3655975	1.085723141	0.004612118	1.090335258
5121653655975	512165	3655975	0.984822335	0.004809911	0.989632246
5121253655986	512125	3655986	1.181525141	0.003956095	1.185481236
5121453655986	512145	3655986	1.056626789	0.004105229	1.060732018
5121653655986	512165	3655986	0.958118569	0.004207652	0.962326221
5121453655997	512145	3655997	1.027145115	0.003671975	1.030817091

Ramona Intergenerational Community Campus Affordable Housing Project

Maximum Individual Non-Cancer Impact Calculations - Sensitive Receptors (Maximum Impacted Senior Residential Receptor) (IMPACT AT ALL OTHER LOCATIONS ON THE PROJECT SITE WOULD BE LESS THAN SHOWN)

Maximum Non-cancer Chronic Hazards / Toxicological Endpoints*

Receptor Group	Pollutant	CREL ¹	CONC	WFrac	CONC _{WF}	HI		ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	
Project: MEI - Max	DPM	5.00E+00	3.96E-02	1.00E+00	3.96E-02	7.93E-03															
							Total Risk Threshold Over?	-	-	-	-	-	-	-	-	-	-	7.93E-03	-		
													1.00		1.00			1.00	1.00		
													NO		NO			NO	NO		

Notes:

1. California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values," "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," "OEHHA/ARB Approved Acute Reference Exposure Levels and Target Organs," and "OEHHA/ARB Approved 8-Hour Reference Exposure Levels and Target Organs," <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Tables last updated: May 8, 2018. Downloaded: 08/14/18.

Source: ESA, 2020

Where:

CONC _{WF}	Pollutant Concentration ($\mu\text{g}/\text{m}^3$) multiplied by the weight fraction
CREL	Chronic Reference Exposure Level
HI	Hazard Index
MEI	Maximally Exposed Individual
WFrac	Weight fraction of speciated component

* Key to Toxicological Endpoints

ALIM	Alimentary Tract	EYE	Eye	NS	Nervous System
BN	Bone	HEM	Hematologic System	REPRO	Reproductive System
CVS	Cardiovascular System	IMMUN	Immune System	RESP	Respiratory System
DEV	Developmental System	KIDN	Kidney	SK	Skin
ENDC	Endocrine System				