Woodside Self Storage Project

Air Quality Technical Report

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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
AAM	Annual Arithmetic Mean
APN	Assessor's Parcel Number
AQIA	Air Quality Impact Assessment
Attainment Plan	Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County
BMP	best management practice
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	carbon monoxide
County	County of San Diego
CY	cubic yard
DPM	diesel particulate matter
°F	degrees Fahrenheit
GHG	greenhouse gas
H_2S	hydrogen sulfide
lbs.	pounds
LOS	level of service
mg/m^3	milligrams per cubic meter
mph	miles per hour
NAAQS	National Ambient Air Quality Standard
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment

ACRONYMS AND ABBREVIATIONS (cont.)

PM	particulate matter
PM_{10}	coarse particulate matter (particulate matter with an aerodynamic diameter of 10 microns or less)
$PM_{2.5}$	fine particulate matter (particulate matter with an aerodynamic diameter of 2.5 microns or less)
ppb	parts per billion
ppm	parts per million
project	Woodside Self Storage Project
RAQS	Regional Air Quality Strategy
ROG	reactive organic gas
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SLT	screening-level threshold
SF	square feet
SO_2	sulfur dioxide
SO_X	oxides of sulfur
TACs	Toxic Air Contaminants
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
WRCC	Western Regional Climate Center

EXECUTIVE SUMMARY

This report presents an assessment of potential air quality impacts associated with the proposed Woodside Self Storage Project (project). The project would develop a self-storage facility consisting of one building with one below-grade level and three above-grade levels in the unincorporated community of Lakeside in San Diego County. The evaluation addresses the potential for air pollutant emissions during the construction and operation of the project.

The project would result in emissions of air pollutants during the construction and operational phases of the project. Construction and operational best management practices (BMPs) would be implemented by the project, including measures to minimize fugitive dust emissions, such as watering twice per day. With the inclusion of these BMPs, emissions of all criteria pollutants would be below the daily thresholds during the construction and operation of the project, and impacts would be less than significant.

Development of the project would not conflict with the San Diego Air Pollution Control District's (SDAPCD's) Regional Air Quality Strategy (RAQS) and *Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County* (Attainment Plan) and would not result in cumulatively considerable emissions of nonattainment air pollutants that would exceed the screening level thresholds.

The project would not result in the exposure of sensitive receptors to substantial emissions of pollutants, toxic air contaminants, or odors. The project would not result in the degradation of roadway intersections such that emissions of carbon monoxide (CO) would result in a CO hotspot. Construction activities and project operation would not expose substantial numbers of people to objectionable odors.

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1.0 INTRODUCTION

This report analyzes potential air quality impacts associated with the proposed Woodside Self Storage Project (project), which includes an evaluation of existing conditions in the project vicinity and an assessment of potential impacts associated with project construction and project operation. The analysis of impacts and report is prepared in accordance with the County of San Diego (County) Guidelines for Determining Significance and Report Content and Format Requirements for Air Quality (County 2007).

1.1 PROJECT LOCATION

The project site is located at 12431 Woodside Avenue in the unincorporated community of Lakeside in San Diego County. More specifically, the project site is in a commercial center (e.g., strip mall) located west of Cactus Street, between Woodside Avenue (to the north) and Julian Avenue (to the south). The primary access to the site is from Cactus Street. The approximately 0.79-acre project site consists of the southeast corner of one lot—Assessor's Parcel Number (APN) 94-122-1600. See Figure 1, *Regional Location*, and Figure 2, *Aerial Photograph*.

1.2 PROJECT DESCRIPTION

The project would develop a self-storage facility consisting of one building with one below-grade level and three above-grade levels totaling 102,236 square feet (SF) of floor space. An approximately 1,180 SF office area would be provided on the ground floor. The project would provide 14 parking spaces on the north side of the building, and a recessed loading bay would be located on the south side of the building. The self-storage and office areas would be climate-controlled (e.g., heating and air conditioning) but would not include refrigerated storage space. Approximately 6,715 SF of landscape area would be provided, and the remainder of the project site would be asphalt or concrete impervious surfaces. The project would include sidewalk improvements along the project frontage on Cactus Street. See Figure 3, *Site Plan*. As part of the project, best management practices (BMPs) would be incorporated to control fugitive dust during project construction activities, see Section 1.3, below. The project would include the following project design features (enforced by the County as conditions of approval) related to regional and statewide GHG reduction goals:

- The project would be all-electric and would not include natural gas appliances or natural gas plumbing; and

- The project would implement 2022 CALGreen nonresidential voluntary Tier 2 electric vehicle parking measures in accordance with CALGreen Section A5.106.5.3 and Table A5.106.5.3.2: a minimum of eight of the project's parking spaces would be EV capable spaces[1] meeting the requirements of 2022 CALGreen Section 5.106.5.3.1, and a minimum three of those EV capable spaces would include electric vehicle supply equipment (EVSE).

[1] Per 2022 CALGreen Chapter 2, Definitions, an EV Capable Space is defined as a vehicle space with electrical panel space and load capacity to support a branch circuit and necessary raceways, both underground and/or surface mounted, to support EV charging. EV Capable spaces.

1.3 FUGITIVE DUST REGULATORY REQUIREMENTS AND BEST MANAGEMENT PRACTICES

The project would incorporate BMPs during construction to reduce emissions of fugitive dust. San Diego County Air Pollution Control District (SDAPCD) Rule 55 – Fugitive Dust Control states that no dust and/or dirt shall leave the property line, as follows (SDAPCD 2005):

1. **Airborne Dust Beyond the Property Line:** No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.

2. **Track-Out/Carry-Out:** Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:

   (i) be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation:

      (a) track-out grates or gravel beds at each egress point;

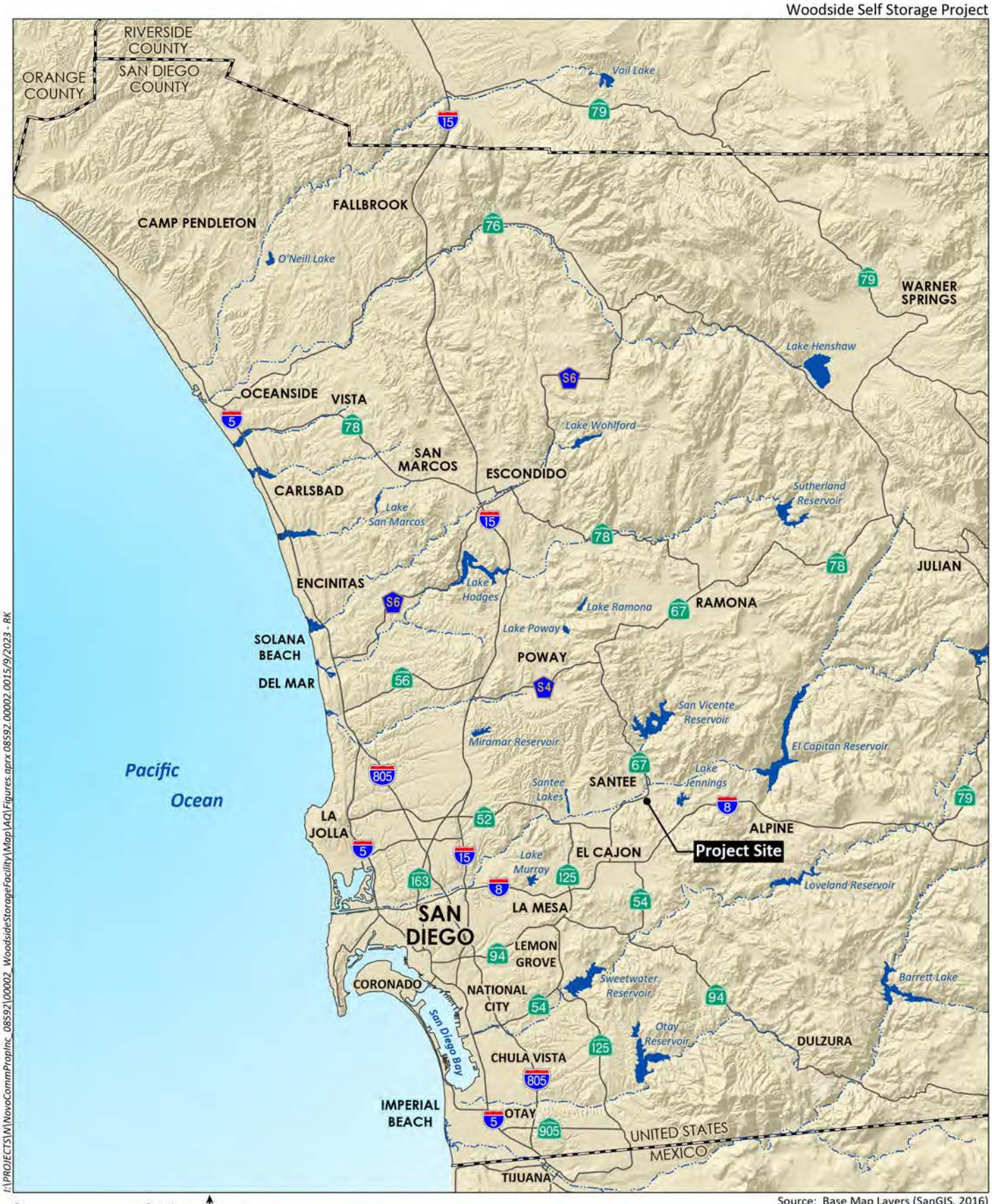
      (b) wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks;

      (c) using secured tarps or cargo covering, watering, or treating of transported material; and

   (ii) be removed at the conclusion of each workday when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/ carry-out, only respirable particulate matter (PM_{10}) -efficient street sweepers certified to meet the most current South Coast Air Quality Management District (SCAQMD) Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

As part of the project, the BMP control measures listed below would be implemented during project construction activities to meet the requirements of SDAPCD Rule 55:

- Dirt and aggregate storage piles shall be stabilized by chemical binders, tarps, fencing, or other erosion control.
- A 15 miles per hour (mph) speed limit shall be enforced on unpaved surfaces.
- During dry weather, dirt and debris spilled onto paved surfaces shall be removed promptly to reduce the resuspension of particulate matter caused by vehicle movement. Track out of material onto public roads shall be cleaned daily during dry weather.
- Trucks hauling dirt, sand, soil, or other loose materials shall be covered, or two feet of freeboard will be maintained.
- Ground disturbance shall be terminated if winds exceed 25 mph.
- All exposed areas shall be watered a minimum of twice per day.



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Source: Base Map Layers (SanGIS, 2016)

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Regional Location

Figure 1

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Source: Aerial (NearMap, 2019)

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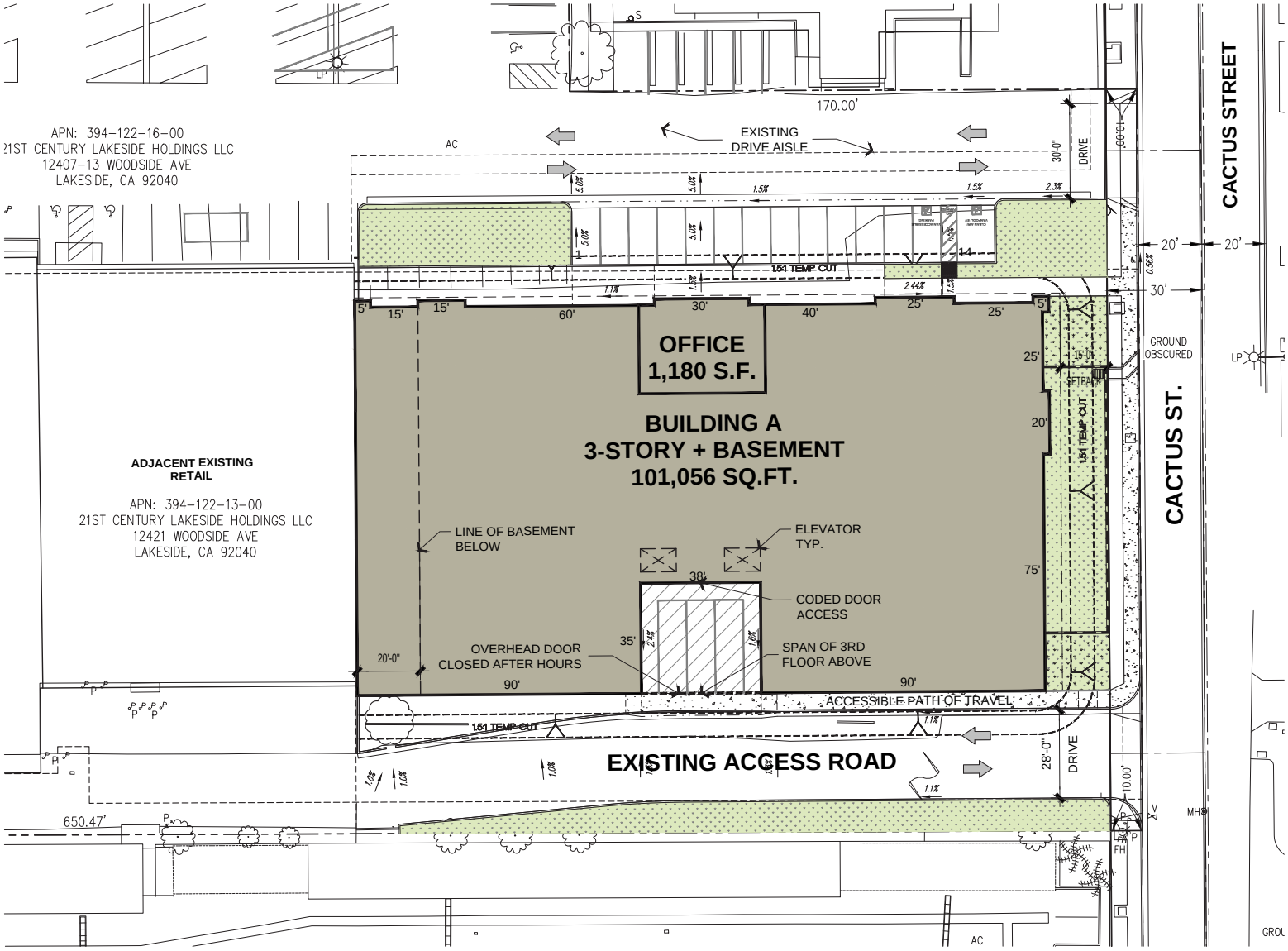
Aerial Photograph

Figure 2



Source: Jordan Architects 2022

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Site Plan

Figure 3

2.0 EXISTING CONDITIONS

2.1 EXISTING SETTING

The project site is an undeveloped area in the southeast corner of an existing retail center, or strip mall, located south of Woodside Avenue, between Channel Road and Cactus Street. The project building would abut an existing auto parts store to the west. A commercial/retail building (undergoing interior renovation at the time of this analysis) is located north of the project site, across a strip mall driveway. A multi-family housing complex is located adjacent to and south of the project site, with the closest building approximately 70 feet from the project site. Single-family homes are located approximately 60 feet east of the project site, across Cactus Street. Commercial buildings are located across Cactus Street, east and northeast of the project site.

2.1.1 Sensitive Receptors

The California Air Resources Board (CARB) and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005, OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The closest existing sensitive receptors to the project site are multifamily apartment buildings approximately 60 feet south of the project site and single-family residences approximately 65 feet east of the project site, across Cactus Street. Two daycare centers are located approximately 400 feet east and 410 feet northeast of the project site. The closest school is Lemon Crest Elementary School approximately 1,065 feet (0.2 mile) southeast of the project site. The sensitive receptor locations are shown in Figure 4, *Sensitive Receptor Locations*.

2.2 CLIMATE / METEOROLOGY AND TEMPERATURE INVERSIONS

The climate in southern California, including the San Diego Air Basin (SDAB), is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity.

The annual average maximum temperature in the project area is approximately 80 degrees Fahrenheit (°F), and the average minimum temperature is approximately 50°F. Total precipitation in the project area averaged approximately 15.7 inches between 1948 and 2016. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center [WRCC] 2023).

Due to its climate, the SDAB experiences frequent temperature inversions (temperature increases as altitude increases, which is the opposite of general patterns). Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface

and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter, on days with summer-like conditions.

2.3 AIR POLLUTANTS OF CONCERN

2.3.1 Criteria Air Pollutants

Six air pollutants have been identified by the U.S. Environmental Protection Agency (USEPA) and CARB as being of concern both on a nationwide and statewide level: ground-level ozone (O_3), CO, NO_2, sulfur dioxide (SO_2), lead, and particulate matter (PM), which is subdivided into two classes based on particle size: coarse PM equal to or less than 10 micrometers in diameter (PM_{10}) and fine PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$). These air pollutants are commonly referred to as "criteria air pollutants" because air quality standards are regulated using human health and environmentally based criteria. Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, SO_2, PM_{10}, $PM_{2.5}$, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants (secondary pollutants; e.g., ozone and NO_2) in the atmosphere. The principal precursor pollutants of concern are reactive organic gasses ([ROGs] also known as volatile organic compounds [VOCs])[2] and nitrogen oxides (NO_X).

The descriptions of sources and general health effects for each of the criteria air pollutants are shown in Table 1, *Summary of Common Sources and Human Health Effects of Criteria Air Pollutants,* based on information provided by the California Air Pollution Control Officers Association (CAPCOA; 2023). Specific adverse health effects to individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individuals [e.g., age, gender]). Criteria pollutant precursors (ROG and NO_X) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone and NO_2 are, therefore, the product of emissions generated by numerous sources throughout a region. As such, specific health effects from these criteria pollutant emissions cannot be directly correlated to the incremental contribution from a single project.

Table 1
SUMMARY OF COMMON SOURCES AND HUMAN HEALTH EFFECTS OF CRITERIA AIR POLLUTANTS

Pollutant	Major Man-Made Sources	Human Health Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous systems. Impairs vision, causes dizziness, and can lead to unconsciousness or death.

[2] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

Pollutant	Major Man-Made Sources	Human Health Effects
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to climate change and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrogen oxides (NO_X) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles and dyes.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and other sources.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned, when gasoline is extracted from oil, or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Lead	Metallic element emitted from metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CAPCOA 2023

2.3.2 Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye-watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe, and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

The Health and Safety Code (§39655, subdivision (a) defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant pursuant to subsection

(b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, the CARB identified DPM as a toxic air contaminant based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a significant impact on California's population—it is estimated that about 70 percent of the total known cancer risk related to air toxics in California is attributable to DPM (CARB 2023a).

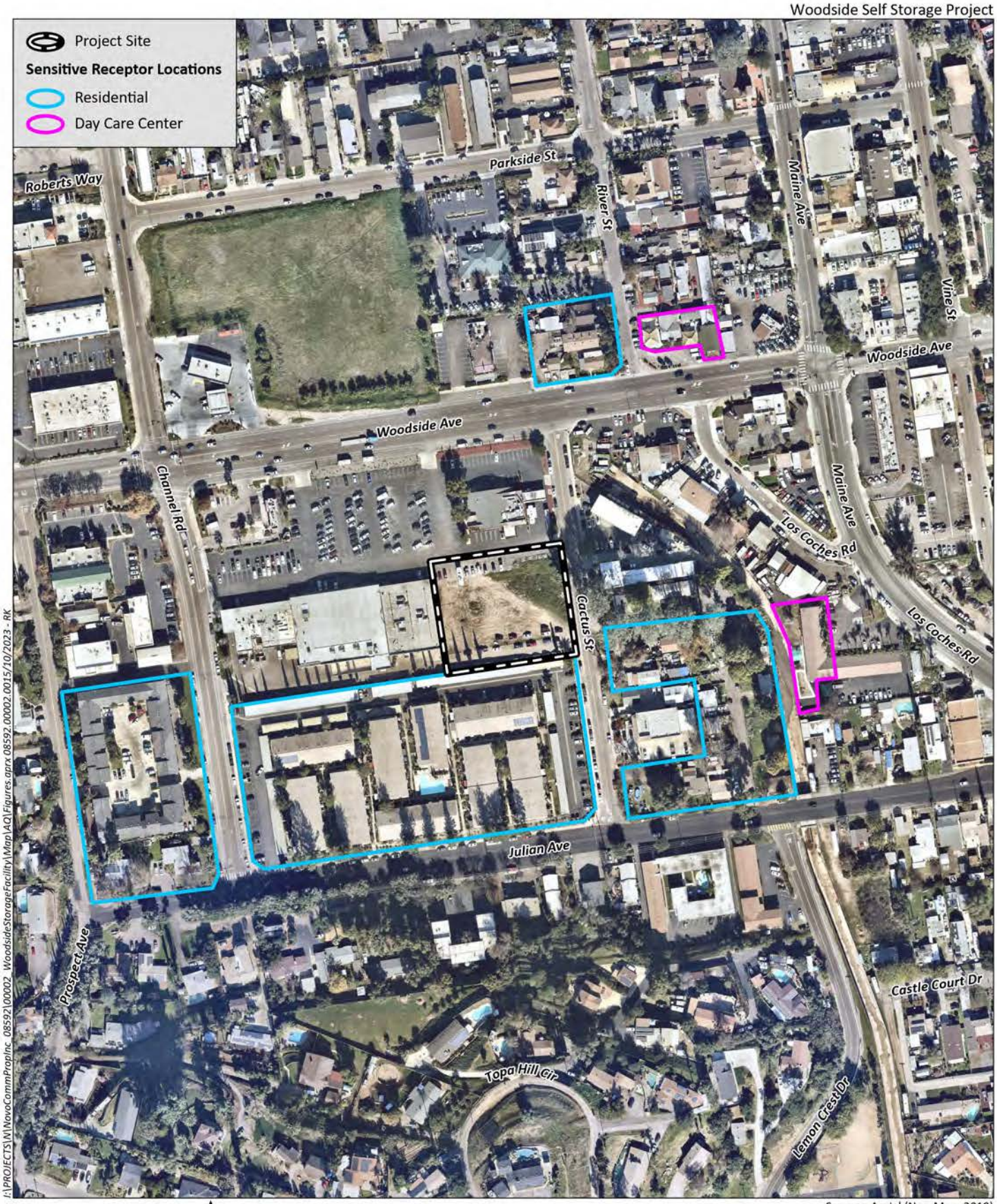
2.3.3 Odors

Odor issues are very subjective by the nature of odors themselves and their measurements are difficult to quantify. The ability to detect odors varies considerably among the population and people may have different reactions to the same odor. While offensive odors rarely cause physical harm, they can be unpleasant, leading to quality of life and sleep issues for affected individuals. Any project with the potential to create objectionable odors affecting a substantial number of people would be considered to have a significant impact under CEQA Guidelines Appendix G.

SDAPCD Rule 51, *Nuisance*, and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section §41700 prohibit the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of the public. Some land uses are known to generate odors objectionable to most people including wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. Projects required to obtain permits from the SDAPCD, typically industrial and some commercial projects, are evaluated by the SDAPCD for potential odor nuisance and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance (County 2007).

2.4 REGULATORY SETTING

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to the health and welfare of the general public. The USEPA is responsible for enforcing the Federal CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for criteria pollutants. Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere. The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California



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Source: Aerial (NearMap, 2019)

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Sensitive Receptor Locations

Figure 4

Clean Air Act of 1988 (CCAA), and has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide (H_2S), vinyl chloride and visibility-reducing particles. Table 2, *California and National Ambient Air Quality Standards,* shows the federal and state ambient air quality standards.

Table 1
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary[1]	Federal Standards Secondary[2]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
SO_2	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	–	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	Same as Primary
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	No Federal Standards	No Federal Standards
Sulfates	24 Hour	25 µg/m^3	No Federal Standards	No Federal Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	No Federal Standards	No Federal Standards
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	No Federal Standards	No Federal Standards

Source: CARB 2016.

[1] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

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

O_3 = ozone; ppm: parts per million; µg/m^3 = micrograms per cubic meter; PM_{10} = particulate matter 10 microns or less in diameter; AAM = Annual Arithmetic Mean; $PM_{2.5}$ = fine particulate matter 2.5 microns or less in diameter; CO = carbon monoxide; mg/m^3 = milligrams per cubic meter; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide; km = kilometer; – = No Standard.

Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. The area air quality attainment status of the SDAB is shown in Table 3, *San Diego Air Basin Attainment Status*. On August 3, 2018, the SDAB was classified as a moderate nonattainment area for the 8-hour NAAQS for ozone (SDAPCD 2023a). The SDAB is an attainment area or unclassified for the NAAQS for all other criteria pollutants, including PM_{10} and $PM_{2.5}$.

Table 2
SAN DIEGO AIR BASIN ATTAINMENT STATUS

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone (1-hour)	Nonattainment	Attainment[1]
Ozone (8-hour)	Nonattainment	Nonattainment (Severe-15)[2]
Coarse Particulate Matter (PM_{10})	Nonattainment	Unclassifiable[3]
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Attainment
Carbon Monoxide (CO)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide ($N0_2$)	Attainment	Attainment
Lead	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Source: SDAPCD 2023a; USEPA 2023

1 The federal 1-hour ozone standard was revoked in 2005.

2 Federal 2015 8-hour ozone standard "Nonattainment Severe-15" designation means the area has a design value of 0.105 parts per million (ppm) up to but not including 0.111 ppm, and 15 years to reach attainment.

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

CARB is the state regulatory agency with the authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for the County.

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for the attainment and maintenance of the ambient air quality standards in the SDAB. The regional air quality plan for San Diego County for attainment of the NAAQS is SDAPCD's *2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County* (Attainment Plan; SDAPCD 2020). The Attainment Plan, which would be a revision to the SIP, outlines SDAPCD's strategies and control measures designed to attain the NAAQS for ozone. For the attainment of the CAAQS, the SDAPCD must prepare an updated State Ozone Attainment Plan to identify possible new actions to further reduce emissions. Initially adopted in 1992, the Regional Air Quality Strategy (RAQS) identifies measures to reduce emissions from sources regulated by the SDAPCD, primarily stationary sources such as industrial operations and manufacturing facilities. The RAQS is periodically updated to reflect updated information on air quality, emission trends, and new feasible control measures, and was last updated in 2023 (SDAPCD 2023b). These plans accommodate emissions from all sources, including natural sources, through the implementation of control measures, where

feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and CARB, and the emissions and reduction strategies related to mobile sources are considered in the Attainment Plan and RAQS. The Attainment Plan and RAQS, in combination with local plans from all other California nonattainment areas with serious (or worse) air quality problems, are submitted to the CARB, which develops the California State Implementation Plan (SIP).

The Attainment Plan and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan.

2.5 AMBIENT AIR QUALITY

The SDAPCD operates a network of ambient air monitoring stations throughout the County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the El Cajon-Lexington Elementary School Monitoring Station, located at 533 First Street in El Cajon, approximately 3.4 miles northwest of the project site. The El Cajon-Lexington Elementary School Monitoring Station is located in an inland valley and is representative of the climatological and topographical conditions at the project site. At the time of this analysis, PM_{10} monitoring data in San Diego County was limited and only data for 2019 was available. Air quality data are shown on Table 4, *Air Quality Monitoring Data.*

Table 4
AIR QUALITY MONITORING DATA

Pollutant Standard	2019	2020	2021
Ozone (O_3) – El Cajon Station			
Maximum concentration 1-hour period (ppm)	0.084	0.115	0.076
Maximum concentration 8-hour period (ppm)	0.072	0.087	0.063
Days above 1-hour state standard (>0.09 ppm)	0	2	0
Days above 8-hour state/federal standard (>0.070 ppm)	1	3	0
Coarse Particulate Matter (PM_{10}) – El Cajon Station			
Maximum 24-hour concentration (µg/m^3)	68.2	*	*
Measured Days above 24-hr state standard (>50 µg/m^3)	1	*	*
Measured Days above 24-hr federal standard (>150 µg/m^3)	0	*	*
Annual average (µg/m^3)	*	*	*
Exceed state annual standard (20 µg/m^3)	*	*	*
Fine Particulate Matter ($PM_{2.5}$) – El Cajon Station			
Maximum 24-hour concentration (µg/m^3)	*	51.9	25.6
Measured Days above 24-hour federal standard (>35 µg/m^3)	*	2	0
Annual average (µg/m^3)	*	10.6	9.7
Exceed federal annual standard (12 µg/m^3)	*	No	No
Nitrogen Dioxide (NO_2) – El Cajon Station			
Maximum 1-hour concentration (ppm)	0.062	0.053	0.054
Days above state 1-hour standard (0.18 ppm)	0	0	0
Days above federal 1-hour standard (0.100 ppm)	0	0	0

Pollutant Standard	2019	2020	2021
Annual average (ppm)	*	0.010	0.009
Exceed annual federal standard (0.053 ppm)	No	No	No
Exceed annual state standard (0.030 ppm)	*	No	No

Source: CARB 2023b.

ppb = parts per billion; ppm = parts per million; µg/m^3 = micrograms per cubic meter, * = insufficient data available.

Monitoring data at El Cajon-Lexington Elementary School Monitoring Station show exceedance of the state one-hour standard for ozone occurred twice in 2020. Exceedance of the state and federal eight-hour standards for ozone occurred on one day in 2019 and three days in 2020. Exceedance of the state daily standard for PM_{10} occurred once in 2019. Exceedance of the federal daily standard for $PM_{2.5}$ occurred twice in 2020.

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

3.1 SIGNIFICANCE CRITERIA

The County (2007) has approved guidelines for determining significance (County Guidelines) based on Appendix G.III of the State California Environmental Quality Act (CEQA) Guidelines, which provide guidance that a project would have a significant environmental impact if it would:

1. Conflict with or obstruct the implementation of the San Diego RAQS or Attainment Plan;

2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation;

3. Result in a cumulatively considerable net increase for which the SDAB is in non-attainment of NAAQS or CAAQS;

4. Expose sensitive receptors (including, but not limited to, residences, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations; and/or

5. Create objectionable odors affecting a substantial number of people.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, or (b) result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for ozone precursors, NO_X and ROGs, project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD. The County has adopted, as screening-level thresholds (SLTs), the Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources from the SDAPCD Rules 20.2 and 20.3 (SDAPCD 2019a; 2019b). The County has also adopted the SCAQMD's screening threshold of 55 pounds (lbs.) per day or 10 tons per year as a significance threshold for $PM_{2.5}$ (SCAQMD 2015).

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in Table 5, *Screening-Level Thresholds for Air Quality Impact Analysis.*

Table 5
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS

Pollutant	Total Emissions		
Construction Emissions			
	Pounds per Day		
Coarse Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NO_X)	250		
Oxides of Sulfur (SO_X)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Pounds per Hour	**Pounds per Day**	**Tons per Year**
Coarse Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NO_X)	25	250	40
Oxides of Sulfur (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	10 in 1 million		
Non-Cancer Hazard Index	1.0		

Source: County 2007; SDAPCD 2019a, 2019b; SCAQMD 2015.

3.2 METHODOLOGY

The air quality impact analysis contained in this report was prepared in accordance with the methodologies provided by the County as included in the *Guidelines for Determining Significance and Report Format and Content Requirements for Air Quality* (County 2007).

Criteria pollutant emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.12. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed for CAPCOA in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and default input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices (CAPCOA 2022). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. CalEEMod output files for the project are included in Appendix A of this report.

3.2.1 Project Construction

Construction emissions were modeled using CalEEMod, as described above. Default data sources in CalEEMod for construction emissions include construction surveys, off-road equipment emissions factors from CARB's OFFROAD2017 emissions inventory, and on-road emissions factors for CARB's

EMFAC2019 emissions inventory. The complete calculation methodology and sources of data used in CalEEMod can be found in the CalEEMod User's Guide, and Appendices C, D, F, and G to the User's Guide (CAPCOA 2022).

Construction emissions calculations were based on CalEEMod defaults, and the estimated construction activity durations provided by the project engineers. An estimate of the project construction start date was not available at the time of this analysis. Therefore, project construction was assumed to commence at the earliest reasonably foreseeable date of January 2024, and be completed in November 2024 for a total construction duration of approximately 11 months. The emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of: (1) a more modern and cleaner-burning construction equipment fleet mix than assumed in CalEEMod; and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

Although it was assumed that all of the dust control measures listed in Section 1.3 of this report would be implemented to model the most conservative construction estimates, only the application of water twice per day was taken into consideration.

3.2.1.1 Construction Activities

Project construction activities would include site preparation and clearing, demolition of old concrete and asphalt, grading/excavation, installation of underground utilities, physical building construction, paving, and architectural coating. The project site was rough graded when the existing strip mall was constructed. Project grading activities would consist primarily of excavating for the project building basement level. The construction schedule assumed in the modeling is shown in Table 6, *Anticipated Construction Schedule*.

Table 6
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period Start	Construction Period End	Number of Working Days
Demolition	1/1/2024	1/1/2024	1
Site Preparation	1/2/2024	1/3/2024	2
Grading/Excavation	1/4/2024	1/24/2024	15
Underground Utilities	1/25/2024	1/29/2024	3
Building Construction	1/30/2024	11/4/2024	200
Paving	11/5/2024	11/7/2024	3
Architectural Coatings	11/8/2024	11/21/2024	10

Source: Project Engineer; CalEEMod.

3.2.1.2 Construction Off-Road Equipment

Construction would require the use of heavy off-road equipment. Construction equipment estimates are based on input from the project engineer and default values in CalEEMod. Table 7, *Construction*

Equipment Assumptions, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 7
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Equipment	Horsepower	Number	Hours/Day
Demolition			
Tractors/Loaders/Backhoes	84	1	8
Water Trucks	376	1	2
Site Preparation			
Skid Steer Loaders	71	1	8
Water Trucks	376	1	2
Grading/Excavation			
Excavators	300	1	8
Skid Steer Loaders	71	1	8
Water Trucks	376	1	2
Underground Utilities			
Tractors/Loaders/Backhoes	84	1	8
Water Trucks	376	1	2
Building Construction			
Cranes	367	1	6
Forklifts	82	1	6
Aerial Lifts	46	2	6
Paving			
Pavers	81	1	6
Rollers	36	1	7
Skid Steer Loader	71	1	8
Architectural Coating			
Air Compressors	37	1	6

Source: Project Engineer; CalEEMod (complete data is provided in Appendix A of this report).

3.2.1.3 Construction On-Road Trips

Worker commute trips and vendor delivery trips were modeled based on CalEEMod defaults. Worker trips are anticipated to vary between 5 and 42 trips per day, depending on construction activity. Worker trips used the default one-way trip distance of 12.0 miles. Vendor delivery trips would be 17 per day during building construction. Vendor trips used the default one-way trip distance of 7.63 miles.

Per the project engineer, approximately 317 cubic yards (CY) of vegetation and debris (approximately 20 truckloads) would be hauled from the project site during site preparations, approximately 20 truckloads of concrete and asphalt would be hauled from the project site during demolition, and approximately of 8,471 CY of soil (approximately 71 truckloads per day) would be exported from the site during grading/excavation. Demolition debris (concrete and asphalt) and soil would be hauled to Ennis, Inc., an approximately 4.3-mile one-way haul distance.

3.2.2 Project Operations

Project operational emissions were modeled using CalEEMod, as described above.

3.2.2.1 Modeled Land Uses

Project land uses were modeled based on the project description and project plan provided by the project engineer/architect. The project building self-storage space was modeled as "Unrefrigerated Warehouse – No Rail", and the project building office space was modeled as "General Office Building."

3.2.2.2 Area Source Emissions

Area sources include emissions from landscaping equipment, the use of consumer products, and the reapplication of architectural coatings for maintenance. Emissions associated with the architectural coating applied for maintenance were modeled using the CalEEMod default assumption of 10 percent of surface areas coated each year. CalEEMod default values for landscaping equipment and consumer products were used.

3.2.2.3 Energy Emissions

Development within the project would use electricity for lighting, heating, and cooling. Per the project engineer/architect, the self-storage space would be climate-controlled (i.e., would include heating and air conditioning), but no refrigerated storage space would be included in the project. To account for the extra energy required for climate control, the default energy use for the self-storage space was replaced with energy use using the CalEEMod default rates for a general office building. To account for the all-electric design feature described in Section 1.2, the default CalEEMod natural gas use was replaced with the equivalent electrical energy use (added to the default CalEEMod electricity use). A portion of the electricity generation typically entails the combustion of fossil fuels, including natural gas and coal, which occurs at the power plant(s). A building's electricity use is thus associated with off-site or indirect emissions at the source of electricity generation, and these emissions are not included in the analysis of a land use development project's local or regional air quality impacts.

California 2022 Title 24 Part 6 building energy standards include a requirement for on-site solar electricity generation which could be applicable to the project. The minimum amount of solar electricity generated to meet the 2022 Tile 24 standards is based on climate zone, the building's conditioned floor area (the floor space that would include heating or air conditioning), and the available roof space. Because the amount of available roof space was unknown at the time of this analysis, to be conservative, no energy use reductions resulting from project solar panels were included in the modeling.

3.2.2.4 Vehicular (Mobile) Sources

Operational emissions from mobile sources are associated with project-related vehicle trip generation and trip length. Project trip generation was estimated by County planning staff using SANDAG trip generates rates—the project would generate 204 average daily trips with 12 morning peak trips and 19 afternoon peak trips (County 2023). The CalEEMod default trip distances, purposes, and fleet mix were used.

4.0 PROJECT IMPACT ANALYSIS

4.1 CONFORMANCE TO THE REGIONAL AIR QUALITY STRATEGY

4.1.1 Guideline for the Determination of Significance

Would the project conflict with or obstruct the implementation of the San Diego RAQS or Attainment Plan?

The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for ozone. In addition, the SDAPCD's Attainment Plan includes the SDAPCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through the implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and the CARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from the CARB and SANDAG, including projected growth in the County, mobile, area, and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and the County. As such, projects that propose development that is consistent with the growth anticipated by the local jurisdictions' general plans would be consistent with the RAQS. In the event that a project proposes development that is less dense than anticipated within the General Plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the County General Plan and SANDAG's growth projections upon which the RAQS and Attainment Plan are based, the project would be in conflict with the RAQS and Attainment Plan and may have a potentially significant impact on air quality.

4.1.2 Significance of Impacts Prior to Mitigation

The project site is currently zoned as C36, Commercial and Office, and has a General Plan land use designation of General Commercial. The project would be consistent with the zoning and land use designation. Therefore, the project would be consistent with the regional growth assumed in the RAQS and Attainment Plan, and the project would not conflict with or obstruct the implementation of those plans. The impact would be less than significant.

4.1.3 Mitigation Measures and Design Considerations

Impacts would be less than significant, and no mitigation would be required.

4.1.4 Conclusions

The project would be consistent with the project site zoning and General Plan land use designation, and with the growth projections in the General Plan used in the development of the RAQS and SIP. Therefore, the project would not conflict with or obstruct the implementation of the San Diego RAQS or Attainment Plan, and the impact would be less than significant.

4.2 CONFORMANCE TO FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

4.2.1 Construction Impacts

Project construction activities would have the potential to adversely affect air quality through the generation of criteria pollutants (which include fugitive dust emissions) and criteria pollutant precursors.

4.2.1.1 Guideline for the Determination of Significance

Would the project construction result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?

To determine whether a project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, project emissions may be evaluated based on the quantitative emission thresholds adopted by the County (as shown in Table 5).

4.2.1.2 Significance of Impacts Prior to Mitigation

General Construction Activities

Table 8, *Maximum Daily Construction Emissions,* provides a summary of the unmitigated maximum daily construction emission estimates by activity and season. Modeling assumed that dust control measures (watering a minimum of two times daily) would be employed to reduce emissions of fugitive dust during construction.

Table 8
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Activity	Season	VOC (lbs./day)	NO_X (lbs./day)	CO (lbs./day)	SO_X (lbs./day)	PM_{10} (lbs./day)	$PM_{2.5}$ (lbs./day)
Demolition	Winter	0.3	2.7	3.2	<0.1	0.2	0.1
Site Preparation	Winter	0.2	3.7	3.2	<0.1	0.5	0.2
Grading	Winter	0.5	5.7	5.3	<0.1	0.5	0.2
Underground Utilities	Winter	0.7	5.4	2.9	<0.1	0.4	0.4
Building Construction	Winter	0.6	5.4	6.4	<0.1	0.6	0.3
Building Construction	Summer	0.6	5.4	6.7	<0.1	0.6	0.3
Paving	Winter	0.5	2.9	4.3	<0.1	0.2	0.1
Architectural Coating	Winter	47.6	0.9	1.5	<0.1	0.1	<0.1
Maximum Daily Emissions		**47.6**	**5.4**	**6.7**	**<0.1**	**0.6**	**0.4**
Screening Thresholds		*75*	*250*	*550*	*250*	*100*	*55*
Exceed Thresholds?		***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A of this report).
lbs./day = pounds per day; VOC = volatile organic compound; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter.

As shown in Table 8, without mitigation, emissions of all criteria pollutants would be below the daily thresholds during construction. The project's construction activities would not result in a violation of the NAAQS or CAAQS. As discussed in Section 2.4, the NAAQS and CAAQS for criteria pollutants are designed to protect human health with an adequate margin of safety. Therefore, if the project would not result in

emissions of criteria pollutants exceeding the NAAQS and CAAQS concentration limits shown in Table 2, above, then the project would not result in adverse health effects (described in Table 1, above) for sensitive receptors or population groups. The impact would be less than significant.

4.2.1.3 Mitigation Measures and Design Considerations

As discussed in Section 1.3, the project would incorporate construction BMPs to reduce project-related emissions to satisfy the requirements of the SDAPCD Rule 55. Not all BMPs were included in the project's construction emissions calculations; thus, the implementation of the BMPs would further reduce fugitive dust (PM_{10} and $PM_{2.5}$) emissions resulting from project construction activity.

4.2.1.4 Conclusions

The project's construction activities would not result in a violation of the NAAQS or CAAQS, and the impact would be less than significant.

4.2.2 Operational Impacts

Project operational activities would have the potential to adversely affect air quality through the generation of criteria pollutants (which include fugitive dust emissions) and criteria pollutant precursors.

4.2.2.1 Guideline for the Determination of Significance

Based on the County Guidelines (2007), operational impacts would be potentially significant if they exceed the quantitative screening-level thresholds for criteria pollutants and criteria pollutant precursors adopted by the County (as shown in Table 5).

4.2.2.2 Significance of Impacts Prior to Mitigation

Table 9, *Maximum Unmitigated Daily Operational Emissions*, compares the project operational emissions to the screening thresholds.

Table 3
MAXIMUM UNMITIGATED DAILY OPERATIONAL EMISSIONS

Source	VOC (lbs./day)	NO_X[2] (lbs./day)	CO (lbs./day)	SO_X (lbs./day)	PM_{10} (lbs./day)	$PM_{2.5}$ (lbs./day)
Mobile	0.9	0.7	6.7	<0.1	0.5	0.1
Area	3.0	<0.1	4.4	<0.1	<0.1	<0.1
Energy	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Maximum Daily Emissions[1]	**3.9**	**0.7**	**11.1**	**<0.1**	**0.5**	**0.1**
Screening Thresholds	*137*	*250*	*550*	*250*	*100*	*67*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A of this report).

[1] Totals may not sum due to rounding.

lbs./day = pounds per day; VOC = volatile organic compounds; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 9, emissions of criteria pollutants and ozone precursors during project operation would not exceed the daily screening thresholds. Therefore, the project's operational emissions would

not result in a violation of the NAAQS or CAAQS. As discussed in Section 2.4, the NAAQS and CAAQS for criteria pollutants are designed to protect human health with an adequate margin of safety. Therefore, if the project would not result in emissions of criteria pollutants exceeding the NAAQS and CAAQS concentration limits shown in Table 2, above, then the project would not result in adverse health effects (described in Table 1, above) for sensitive receptors or population groups. The impact would be less than significant.

4.2.2.3 Mitigation Measures and Design Considerations

Impacts would be less than significant, and no mitigation would be required.

4.2.2.4 Conclusions

The project's operational emissions would not exceed the County screening threshold levels. Therefore, operation of the project would not result in a violation of the NAAQS or CAAQS, and the impact would be less than significant.

4.3 CUMULATIVELY CONSIDERABLE NET INCREASE OF CRITERIA POLLUTANTS

4.3.1 Construction Impacts

Based on the County Guidelines (2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the CAAQS and NAAQS. As discussed in Section 2.0, the SDAB is designated as a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously under construction. A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NO_X, or VOCs during construction would also have a significant cumulatively considerable net increase. In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the screening shown in Table 5.

4.3.1.1 Guidelines for the Determination of Significance

The following thresholds are used for the assessment of cumulative construction impacts:

Would the project result in emissions that exceed 250 lbs. per day of NO_X or 75 lbs. per day of VOCs?

Would the project result in emissions of $PM_{2.5}$ that exceed 55 lbs. per day?

Would the project result in emissions of PM_{10} that exceed 100 lbs. per day and increase the ambient PM_{10} concentration by 5.0 micrograms per cubic meter ($\mu g/m^3$) or greater at the maximum exposed individual?

4.3.1.2 Significance of Impacts Prior to Mitigation

As shown in Section 4.2.1, project construction emissions would not exceed the screening level thresholds. Short-term cumulative impacts related to air quality could occur if the construction of the project and other projects in the surrounding area were to occur simultaneously. In particular, with respect to local impacts, the consideration of cumulative construction particulate matter (PM_{10} and $PM_{2.5}$) impacts is limited to cases when projects constructed simultaneously are within a few hundred yards of each other because of (1) the combination of the short-range (distance) of particulate dispersion (especially when compared to gaseous pollutants) and (2) the SDAPCD's required dust control measures which further limit particulate dispersion from a project site.

The only approved or pending cumulative project in the project vicinity would be renovations to the existing commercial/retail buildings immediately north of the project site. It is anticipated that only interior renovation to the building north of the project site would have the potential to overlap with project construction. Interior renovations to the existing building would not be expected to generate consequential criteria pollutant emissions.

Section 4.2 concludes that the project's construction emissions would be well below the screening thresholds and impacts would be less than significant; and as discussed in Section 4.4 below, the project would not have significant impacts to sensitive receptors during construction. As discussed in Section 2.4, the NAAQS and CAAQS for criteria pollutants are designed to protect human health with an adequate margin of safety. Therefore, if the project would not result in emissions of criteria pollutants exceeding the NAAQS and CAAQS concentration limits shown in Table 2, above, then the project would not result in adverse health effects (described in Table 1, above) for sensitive receptors or population groups. Therefore, the construction of the project would not result in a cumulatively considerable contribution to a significant air quality impact pertaining to emissions of criteria air pollutants and ozone precursors.

4.3.1.3 Mitigation Measures and Design Considerations

Control measures for construction are discussed in Section 1.3. As discussed in that section, the implementation of construction BMPs controlling fugitive dust emissions would minimize the project's contribution to cumulative air quality impacts from construction activities. Cumulative projects would also need to comply with SDAPCD Rules for dust control and construction equipment. No mitigation measures would be required.

4.3.1.4 Conclusions

Cumulative impacts associated with project construction emissions of criteria pollutants and ozone precursors would be less than cumulatively considerable.

4.3.2 Operational Impacts

As discussed above, based on the County Guidelines (2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in criteria pollutants and ozone precursors. In accordance with the guidelines, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase. Also, projects that

cause road intersections to operate at or below a level of service (LOS) E and create a CO hotspot create a cumulatively considerable net increase of CO.

4.3.2.1 Guidelines for the Determination of Significance

The following thresholds are used for the assessment of cumulatively considerable net increases in air pollutants during the operational phase:

Would the project conform to the RAQS and/or have a significant direct impact on air quality with regard to operational emissions of PM_{10}, $PM_{2.5}$, NO_X, and/or VOCs, which would also have a significant cumulatively considerable net increase in these emissions?

Would the project cause road intersections or roadway segments to operate at or below LOS E and create a CO hotspot that would result in a cumulatively considerable net increase of CO?

4.3.2.2 Significance of Impacts Prior to Mitigation

As described in Sections 4.1 and 4.2, the project would be consistent with the RAQS, and would not exceed the County's screening-level thresholds. As discussed in Section 4.4.2, the project would not create a CO hotspot that would result in a cumulatively considerable net increase of CO. As discussed in Section 2.4, the NAAQS and CAAQS for criteria pollutants are designed to protect human health with an adequate margin of safety. Therefore, if the project would not result in emissions of criteria pollutants exceeding the NAAQS and CAAQS concentration limits shown in Table 2, above, then the project would not result in adverse health effects (described in Table 1, above) for sensitive receptors or population groups. Therefore, operation of the project would not create a cumulatively considerable net increase in criteria pollutants associated with operation, and the impacts would be less than significant.

4.3.2.3 Mitigation Measures and Design Considerations

Impacts would be less than significant, and no mitigation would be required.

4.3.2.4 Conclusions

Cumulative impacts associated with project operational emissions of criteria pollutants and ozone precursors would be less than cumulatively considerable.

4.4 IMPACTS TO SENSITIVE RECEPTORS

4.4.1 Guidelines for the Determination of Significance

Would the project expose sensitive receptors to substantial pollutant concentrations?

The following guidelines of significance are used by the County to address the above question:

Would the project place sensitive receptors near CO hotspots or create CO hotspots near sensitive receptors?

Would project implementation result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 10 million or a health hazard index greater than 1 and, thus, be deemed as having a potentially significant impact?

4.4.2 Significance of Impacts Prior to Mitigation

4.4.2.1 CO Concentrations (CO Hotspot Analysis)

CO hotspots are most likely to occur at heavily congested intersections where idling vehicles increase localized CO concentrations. The County guidelines call for a CO hotspot analysis if the project would:

- Place sensitive receptors within 500 feet of a signalized intersection with a LOS of E or F, with peak-hour trips exceeding 3,000 vehicles; or

- Cause intersections to operate at LOS E or F, with peak-hour trips exceeding 3,000 vehicles.

As discussed in Section 3.2.2, the project would generate approximately 19 peak-hour trips during operation. No LOS analysis was available for intersections in the project vicinity. However, the project Acoustical Analysis Report included forecasted road segment traffic volumes as part of the traffic noise analysis. The highest volume analyzed intersection would be the intersection of Woodside Avenue and Channel Road which is predicted to carry up to 1,169 peak-hour trips on Woodside Drive and up to 849 peak-hour trips on Channel Road in 2025, including project-generated trips (HELIX 2023b). The predicted maximum volume for project-affected intersections would be 2,018 peak-hour trips (Woodside Avenue trips plus Channel Road trips), less than 3,000 vehicle peak-hour significance criteria for CO hotspots. Therefore, the project would not result in the formation of CO hotspots. Impacts to sensitive receptors resulting from CO hotspots would be less than significant.

4.4.2.2 TAC Emissions

Project construction would result in on-site emissions of the TAC DPM from the use of off-road diesel equipment required for demolition, site preparation, grading, underground utilities, and other construction activities. Health-related risks associated with DPM emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The amount to which the receptors could be exposed, which is a function of concentration and duration of exposure, is the primary factor used to determine health risks. The generation of TAC emissions during construction would be variable and sporadic due to the nature of construction activity. The total project construction period would be approximately 11 months, and the earth-moving activities (site preparation, demolition, grading, and underground utilities) would last approximately one month. Land uses which are typically considered potential operational sources of TACs include distribution centers, rail yards, ports, petroleum refineries, plating operations, dry cleaning facilities, and gasoline dispensing facilities (CARB 2005). The project does not include any of these land uses and, once operational, the project would not include diesel-powered backup generators (a source of DPM) or any other stationary source of TACs. Therefore, operation of the project would not be a substantial source of TAC emissions. Therefore, due to the short duration of emissions and the variable and sporadic nature of construction activities, project-related TAC emissions would not expose sensitive receptors to substantial pollutant concentrations, and the impact would be less than significant.

4.4.3 Mitigation Measures and Design Considerations

Impacts would be less than significant; therefore, no mitigation measures would be required.

4.4.4 Conclusions

Implementation of the project would not result in the formation of CO hotspots due to project-related traffic. Due to the short-term and intermittent nature of construction activity, impacts from construction-period DPM emissions would be less than significant. The project would not expose sensitive receptors to substantial concentrations of pollutants, and impacts would be less than significant.

4.5 ODOR IMPACTS

4.5.1 Guidelines for the Determination of Significance

Based on the County Guidelines (2007), a project would have a significant impact if it would generate objectionable odors or place sensitive receptors next to existing objectionable odors that would affect a considerable number of persons or the public.

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 541700, prohibit the emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. In addition, the County's Zoning Ordinance, Section 6318, states: "all commercial and industrial uses shall be so operated as to not emit matter causing unpleasant odors which are perceptible by the average person at or beyond any lot line of the lot containing said uses." Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required), where necessary, to prevent occurrence of public nuisance.

4.5.2 Significance of Impacts Prior to Mitigation

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations (SCAQMD 1993). The project, involving a self-storage facility, would not include any of these uses. Project construction could result in minor amounts of odors associated with unburned hydrocarbons in diesel heavy equipment exhaust. The odor of these diesel exhausts is objectionable to some; however, emissions would be intermittent and would disperse rapidly, and, therefore, would not affect a substantial number of people. Therefore, impacts associated with odors during the construction and operation of the project would be less than significant.

4.5.3 Mitigation Measures and Design Considerations

Because the project would not generate objectionable odors or place sensitive receptors near existing odor sources that would affect a considerable number of persons or the public, no mitigation measures or additional design considerations would be required.

4.5.4 Conclusions

Due to the nature of the project land uses, there would be no significant odorous air emissions anticipated from construction or operation; therefore, impacts would be less than significant.

5.0 SUMMARY OF RECOMMENDED PROJECT DESIGN FEATURES, IMPACTS, AND MITIGATION

5.1 PROJECT DESIGN FEATURES

As described in Section 1.3, the project would incorporate measures to minimize fugitive dust emissions, including watering twice per day during grading and stabilization of storage piles. The project would comply with Rule 55, which requires that no visible dust be emitted beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period. The project would incorporate measures to minimize the track-out/carry-out of visible roadway dust per Rule 55 and fugitive dust BMPs, including watering exposed surfaces a minimum of twice per day.

5.2 PROJECT IMPACTS

As described in Section 4.1, the project would be consistent with the RAQS and Attainment Plan.

The control measures listed above constitute BMPs for dust control. With the implementation of construction BMPs, air pollutant emissions impacts associated with project construction and operation would be less than significant.

The project would not result in cumulatively considerable emissions of nonattainment air pollutants that would exceed the screening level thresholds.

Impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Impacts from odors generated from the construction and operation of the project would be less than significant.

5.3 PROJECT MITIGATION

Because the project would not result in significant impacts, no mitigation would be required.

6.0 LIST OF PREPARERS

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7.0 REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2023. Health Effects. Available at: http://www.capcoa.org/health-effects/. Accessed January 25, 2023.

2022. User's Guide for CalEEMod Version 2022.1. Available at: https://www.caleemod.com/user-guide.

California Air Resources Board. (CARB). 2023a. Overview: Diesel Exhaust and Health. Available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed May, 2023.

2023b. IADAM Air Quality Data Statistics, Top 4 Summary. Available at: https://www.arb.ca.gov/adam/topfour/topfour1.php. Accessed May 2023.

2016. Ambient Air Quality Standards. May 4. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available at: https://www.arb.ca.gov/ch/handbook.pdf.

County of San Diego. 2023. Electronic communication re Woodside Self Storage Transportation between Mary Poscitelli, Land Use / Environment Planner County of San Diego, and Sean Savage, OMEGA Engineering Consultants, Inc. March 1.

2007. Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality. Land Use and Environmental Group, Department of Planning and Land Use, Department of Public Works. March 19.

HELIX Environmental Planning. 2023a. Woodside Self Storage Project Greenhouse Gas Emissions Technical Report. May.

2023b. Woodside Self Storage Project Acoustical Analysis. May.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Available at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0.

San Diego Air Pollution Control District (SDAPCD). 2023a. Attainment Status. Available at: https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html. Accessed May, 2023.

2023b. 2022 Regional Air Quality Strategy (RAQS). Available at: https://www.sdapcd.org/content/sdapcd/planning.html. Accessed January 25, 2023.

2020. 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County. Updated October 20. Available at: https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/Att%20A%20(Attainment%20Plan)_ws.pdf.

San Diego Air Pollution Control District (SDAPCD) (cont.)

2019a. Rule 20.2 – New source Review Non-Major Stationary Sources. Adopted June 26. Available at: https://www.sdapcd.org/content/dam/sdc/apcd/PDF/Rules_and_Regulations/Permits/APCD_R20.2.pdf.

2019b. Rule 20.2 – New source Review Major Stationary Sources and PSD Stationary Sources. Adopted June 26. Available at: https://www.sdapcd.org/content/dam/sdc/apcd/PDF/Rules_and_Regulations/Permits/APCD_R20.3.pdf.

2005. Rule 55 – Fugitive Dust Control. Available at: https://www.sdapcd.org/content/dam/sdc/apcd/PDF/Rules_and_Regulations/Prohibitions/APCD_R55.pdf.

South Coast Air Quality Management District (SCAQMD). 2015. SCAQMD Air Quality Significance Thresholds. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

1993. CEQA Air Quality Handbook. April.

U.S. Environmental Protection Agency (USEPA). 2023. Nonattainment Areas for Criteria Pollutants (Green Book). Available at: https://www.epa.gov/green-book. Accessed July 2023.

Western Regional Climate Center (WRCC). 2023. Western U.S. Climate Summary – El Capitan Dam, California (042709). Available at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2709. Accessed May 2023.

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Appendix A

CalEEMod Output

Woodside Self Storage - Unmitigated Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Woodside Self Storage - Unmitigated
Construction Start Date	1/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	8.00
Location	32.85617987099049, -116.92333690896973
County	San Diego
City	Unincorporated
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6546
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.12

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

Unrefrigerated Warehouse-No Rail	99.9	1000sqft	0.60	99,876	6,715	—	—	—
General Office Building	1.18	1000sqft	0.00	1,180	0.00	—	—	—
Parking Lot	20.2	1000sqft	0.46	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.61	5.41	6.68	0.01	0.17	0.46	0.63	0.16	0.11	0.27	1,939
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	47.6	5.72	6.43	0.02	0.40	0.46	0.63	0.36	0.11	0.37	2,667
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.67	3.34	3.88	0.01	0.10	0.27	0.38	0.10	0.07	0.16	1,192
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.30	0.61	0.71	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	197

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	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2024	0.61	5.41	6.68	0.01	0.17	0.46	0.63	0.16	0.11	0.27	1,939
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2024	47.6	5.72	6.43	0.02	0.40	0.46	0.63	0.36	0.11	0.37	2,667
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2024	1.67	3.34	3.88	0.01	0.10	0.27	0.38	0.10	0.07	0.16	1,192
Annual	—	—	—	—	—	—	—	—	—	—	—
2024	0.30	0.61	0.71	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	197

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.94	1.56	11.9	0.02	0.08	0.53	0.61	0.09	0.09	0.18	5,405
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.20	1.59	7.06	0.02	0.08	0.53	0.61	0.08	0.09	0.17	5,310
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.55	1.60	9.22	0.02	0.08	0.53	0.61	0.08	0.09	0.18	5,332
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.65	0.29	1.68	< 0.005	0.01	0.10	0.11	0.01	0.02	0.03	883

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	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.88	0.66	6.74	0.02	0.01	0.53	0.54	0.01	0.09	0.11	1,647
Area	3.02	0.04	4.39	< 0.005	0.01	—	0.01	0.01	—	0.01	18.1
Energy	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	3,556
Water	—	—	—	—	—	—	—	—	—	—	4.63
Waste	—	—	—	—	—	—	—	—	—	—	179
Refrig.	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	3.94	1.56	11.9	0.02	0.08	0.53	0.61	0.09	0.09	0.18	5,405
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.86	0.72	6.33	0.02	0.01	0.53	0.54	0.01	0.09	0.11	1,570
Area	2.29	—	—	—	—	—	—	—	—	—	—
Energy	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	3,556
Water	—	—	—	—	—	—	—	—	—	—	4.63
Waste	—	—	—	—	—	—	—	—	—	—	179
Refrig.	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	3.20	1.59	7.06	0.02	0.08	0.53	0.61	0.08	0.09	0.17	5,310
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.85	0.71	6.32	0.02	0.01	0.53	0.54	0.01	0.09	0.11	1,584
Area	2.65	0.02	2.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.95
Energy	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	3,556
Water	—	—	—	—	—	—	—	—	—	—	4.63
Waste	—	—	—	—	—	—	—	—	—	—	179
Refrig.	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	3.55	1.60	9.22	0.02	0.08	0.53	0.61	0.08	0.09	0.18	5,332
Annual	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.13	1.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	262

Area	0.48	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.48
Energy	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	589
Water	—	—	—	—	—	—	—	—	—	—	0.77
Waste	—	—	—	—	—	—	—	—	—	—	29.7
Refrig.	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	0.65	0.29	1.68	< 0.005	0.01	0.10	0.11	0.01	0.02	0.03	883

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	1.98	2.67	0.01	0.08	—	0.08	0.07	—	0.07	625
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.71
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.28

Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	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	0.02	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	46.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.69	0.32	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	360
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.99
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16

3.3. Site Preparation (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	1.67	2.26	0.01	0.06	—	0.06	0.05	—	0.05	579

Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.17
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.53
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	46.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	2.04	0.71	0.01	0.03	0.37	0.40	0.03	0.10	0.13	1,540
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	8.44
Annual	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.40

3.5. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.27	3.82	0.01	0.11	—	0.11	0.10	—	0.10	1,325
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.13	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.5
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.02
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.32	0.00	0.00	0.06	0.06	0.00	0.01	0.01	69.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	2.42	1.14	0.01	0.02	0.28	0.30	0.02	0.08	0.10	1,272
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.10	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	52.3
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	8.66

3.7. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	4.69	4.32	0.01	0.16	—	0.16	0.15	—	0.15	1,082
Onsite truck	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	0.42	4.69	4.32	0.01	0.16	—	0.16	0.15	—	0.15	1,082
Onsite truck	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	0.23	2.57	2.37	0.01	0.09	—	0.09	0.08	—	0.08	593
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.47	0.43	< 0.005	0.02	—	0.02	0.01	—	0.01	98.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.14	2.09	0.00	0.00	0.36	0.36	0.00	0.08	0.08	416
Vendor	0.02	0.58	0.27	< 0.005	0.01	0.11	0.11	0.01	0.03	0.03	441
Hauling	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	0.18	0.16	1.83	0.00	0.00	0.36	0.36	0.00	0.08	0.08	392
Vendor	0.02	0.60	0.28	< 0.005	0.01	0.11	0.11	0.01	0.03	0.03	440
Hauling	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	0.09	0.09	1.02	0.00	0.00	0.20	0.20	0.00	0.05	0.05	217
Vendor	0.01	0.33	0.15	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	241
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	35.9
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.0

Hauling	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 (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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	2.91	3.93	0.01	0.13	—	0.13	0.12	—	0.12	608
Paving	0.20	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.99
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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.83
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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.32	0.00	0.00	0.06	0.06	0.00	0.01	0.01	69.4

Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.58
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.10
Vendor	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

3.11. Architectural Coating (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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	47.4	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.67
Architectural Coatings	1.30	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.61
Architectural Coatings	0.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.37	0.00	0.00	0.07	0.07	0.00	0.02	0.02	78.3
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.17
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.36
Vendor	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

3.13. Trenching (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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	5.37	2.70	< 0.005	0.40	—	0.40	0.36	—	0.36	524
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.31
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.71
Onsite truck	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	0.02	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	46.3
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.38
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.06
Vendor	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

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.88	0.66	6.74	0.02	0.01	0.53	0.54	0.01	0.09	0.11	1,647
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.88	0.66	6.74	0.02	0.01	0.53	0.54	0.01	0.09	0.11	1,647
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.86	0.72	6.33	0.02	0.01	0.53	0.54	0.01	0.09	0.11	1,570
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.86	0.72	6.33	0.02	0.01	0.53	0.54	0.01	0.09	0.11	1,570
Annual	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.16	0.13	1.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	262

General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.13	1.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	262

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	2,461
General Office Building	—	—	—	—	—	—	—	—	—	—	29.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	26.3
Total	—	—	—	—	—	—	—	—	—	—	2,516
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	2,461
General Office Building	—	—	—	—	—	—	—	—	—	—	29.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	26.3
Total	—	—	—	—	—	—	—	—	—	—	2,516
Annual	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	407

General Office Building	—	—	—	—	—	—	—	—	—	—	4.81
Parking Lot	—	—	—	—	—	—	—	—	—	—	4.35
Total	—	—	—	—	—	—	—	—	—	—	417

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.05	0.86	0.72	0.01	0.07	—	0.07	0.07	—	0.07	1,028
General Office Building	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	12.1
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	1,040
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.05	0.86	0.72	0.01	0.07	—	0.07	0.07	—	0.07	1,028
General Office Building	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	12.1
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.05	0.87	0.73	0.01	0.07	—	0.07	0.07	—	0.07	1,040
Annual	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	170
General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.01

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	172

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.16	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.72	0.04	4.39	< 0.005	0.01	—	0.01	0.01	—	0.01	18.1
Total	3.02	0.04	4.39	< 0.005	0.01	—	0.01	0.01	—	0.01	18.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.16	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—
Total	2.29	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.39	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.48

Total	0.48	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.48

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	0.79
General Office Building	—	—	—	—	—	—	—	—	—	—	3.84
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	4.63
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	0.79
General Office Building	—	—	—	—	—	—	—	—	—	—	3.84
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	4.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	0.13
General Office Building	—	—	—	—	—	—	—	—	—	—	0.64
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	0.77

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	177
General Office Building	—	—	—	—	—	—	—	—	—	—	2.07
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	179
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	177
General Office Building	—	—	—	—	—	—	—	—	—	—	2.07
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	179
Annual	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	29.3
General Office Building	—	—	—	—	—	—	—	—	—	—	0.34
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	29.7

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	< 0.005
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	< 0.005
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2024	1/1/2024	5.00	1.00	—
Site Preparation	Site Preparation	1/2/2024	1/3/2024	5.00	2.00	—
Grading	Grading	1/4/2024	1/24/2024	5.00	15.0	—
Building Construction	Building Construction	1/30/2024	11/4/2024	5.00	200	—
Paving	Paving	11/5/2024	11/7/2024	5.00	3.00	—
Architectural Coating	Architectural Coating	11/8/2024	11/21/2024	5.00	10.0	—
Underground Utilities	Trenching	1/25/2024	1/29/2024	5.00	3.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Site Preparation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Preparation	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38

Grading	Excavators	Diesel	Average	1.00	8.00	210	0.38
Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Grading	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Aerial Lifts	Diesel	Average	2.00	6.00	46.0	0.31
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Underground Utilities	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	55.0	0.37
Underground Utilities	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	5.00	12.0	LDA,LDT1,LDT2
Demolition	Vendor	—	7.63	HHDT,MHDT
Demolition	Hauling	20.0	4.30	HHDT
Demolition	Onsite truck	0.00	0.00	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	20.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	7.50	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	70.6	4.30	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	42.3	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	16.6	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	7.50	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	8.47	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
Underground Utilities	—	—	—	—
Underground Utilities	Worker	5.00	12.0	LDA,LDT1,LDT2
Underground Utilities	Vendor	—	7.63	HHDT,MHDT
Underground Utilities	Hauling	0.00	20.0	HHDT
Underground Utilities	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	151,584	50,528	1,212

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	0.00	—
Site Preparation	0.00	317	0.00	0.00	—
Grading	0.00	8,471	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.46

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
General Office Building	0.00	0%

Parking Lot	0.46	50%

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	589	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	204	204	204	74,477	1,920	1,920	1,920	700,781
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	151,584	50,528	1,212

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)
Unrefrigerated Warehouse-No Rail	1,657,374	540	0.0330	0.0040	3,198,332
General Office Building	19,582	540	0.0330	0.0040	37,787
Parking Lot	17,691	540	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	0.00	100,350
General Office Building	209,726	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)

Unrefrigerated Warehouse-No Rail	93.9	—
General Office Building	1.10	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	17.2	annual days of extreme heat
Extreme Precipitation	4.70	annual days with precipitation above 20 mm

Sea Level Rise	0.00	meters of inundation depth
Wildfire	11.0	annual hectares burned

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	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	71.7
AQ-PM	42.9
AQ-DPM	32.0
Drinking Water	63.2
Lead Risk Housing	40.0
Pesticides	0.00
Toxic Releases	25.8

Traffic	29.3
Effect Indicators	—
CleanUp Sites	71.6
Groundwater	14.3
Haz Waste Facilities/Generators	40.1
Impaired Water Bodies	77.3
Solid Waste	80.0
Sensitive Population	—
Asthma	38.3
Cardio-vascular	37.9
Low Birth Weights	67.6
Socioeconomic Factor Indicators	—
Education	53.9
Housing	61.5
Linguistic	47.7
Poverty	58.6
Unemployment	43.1

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	39.36866419
Employed	41.67842936
Median HI	35.01860644
Education	—
Bachelor's or higher	24.75298345

High school enrollment	100
Preschool enrollment	20.3131015
Transportation	—
Auto Access	26.42114718
Active commuting	38.88104709
Social	—
2-parent households	7.019119723
Voting	47.50417041
Neighborhood	—
Alcohol availability	42.56383934
Park access	81.35506224
Retail density	53.49672783
Supermarket access	54.83125882
Tree canopy	11.09970486
Housing	—
Homeownership	28.30745541
Housing habitability	40.01026562
Low-inc homeowner severe housing cost burden	30.0012832
Low-inc renter severe housing cost burden	41.08815604
Uncrowded housing	42.30719877
Health Outcomes	—
Insured adults	56.82022328
Arthritis	0.0
Asthma ER Admissions	51.8
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	12.0
Cognitively Disabled	13.1
Physically Disabled	52.4
Heart Attack ER Admissions	42.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	71.9
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	9.7
SLR Inundation Area	0.0
Children	39.2
Elderly	90.8
English Speaking	56.1
Foreign-born	12.3
Outdoor Workers	39.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	36.5

Traffic Density	29.1
Traffic Access	23.0
Other Indices	—
Hardship	54.5
Other Decision Support	—
2016 Voting	56.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	55.0
Healthy Places Index Score for Project Location (b)	33.0
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	Land use sizes per site plan and project applicant. Parking lot includes parking space, access driveway, and sidewalks.
Construction: Construction Phases	Demolition, Site Preparation Grading, Underground Utilities, and Paving duration per project applicant.
Construction: Off-Road Equipment	Equipment per project applicant. Off-Highway Trucks = water truck.
Construction: Trips and VMT	20 total truck loads asphalt/concrete (40 one-way trips) during demolition per project applicant. Demolition debris (asphalt and concrete) and soil to be hauled to Ennis Inc, 4.3 miles per one-way trip.
Construction: Paving	Parking lots includes all parking spaces, access driveway, and sidewalks--approximately 50% asphalt, 50% concrete.
Operations: Vehicle Data	Trip generation (204 ADT) per County.
Operations: Refrigerants	No refrigeration for unconditioned mini-storage space.
Operations: Water and Waste Water	Mini-storage area (Unrefrigerated Warehouse land use) would not include restrooms or any other indoor water use.
Operations: Energy Use	Because the self-storage area would be conditioned space, energy use for the self storage (unrefrigerated warehouse land use) was reset using the general office building default energy rates.