APPENDIX B

Air Quality and Greenhouse Gas Emissions Modeling Memo

Air Quality & Greenhouse Gas Technical Report

Renfree Field Renovations Project

Sacramento County, California

AUGUST 2023

PREPARED FOR

City of Sacramento

PREPARED BY

SWCA Environmental Consultants

AIR QUALITY & GREENHOUSE GAS TECHNICAL REPORT RENFREE FIELD RENOVATIONS PROJECT SACRAMENTO COUNTY, CALIFORNIA

Prepared for

City of Sacramento

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ACRONYMS AND ABBREVIATIONS

μg/m³	micrograms per cubic meter
AB	Assembly Bill
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
Air Basin	Sacramento Valley Air Basin
AQMP	Air Quality Management Plan
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	California Action Team
CCAA	California Clean Air Act
CAAP	City of Sacramento Climate Action and Adaptation Plan
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Sacramento
City General Plan	City of Sacramento General Plan
DPM	diesel particulate matter
EO	Executive Order
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
GWP	global warming potential
H_2S	hydrogen sulfide
HFCs	hydrofluorocarbons
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
IPCC	Intergovernmental Panel on Climate Change

IWMA	Integrated Waste Management Act
LCFS	Low Carbon Fuel Standard
MMT	million metric tons
MT	metric tons
MTC	Metropolitan Transportation Commission
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
O_3	ozone
OEHHA	California Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
PFCs	perfluorocarbons
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
ppb	parts per billion
ppm	parts per million
project	Renfree Field Renovations Project
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCOTUS	Supreme Court of the United States
SCS	Sustainable Community Strategy
SF_6	sulfur hexafluoride
SMAQMD	Sacramento Metro Air Quality Management District
SO_2	sulfur dioxide
SO_x	sulfur oxides
SRA	source receptor area
SVAB	Sacramento Valley Air Basin
TAC	toxic air contaminant
TSCA	Toxic Substances Control Act
VMT	vehicle miles traveled
VOC	volatile organic compound
ZEV	Zero Emission Vehicle

1 INTRODUCTION

The City of Sacramento (City) retained SWCA Environmental Consultants (SWCA) to conduct an air quality and greenhouse gas emissions (GHGs) technical report in support of the proposed Harry Renfree Field Renovations Project (project) within the Del Paso Regional Park in Sacramento, Sacramento County, California (county). Del Paso Regional Park is an approximately 630-acre, multi-use park that includes three golf courses, lighted ball fields and other recreational features such as picnic areas, a sand volleyball court, a play structure and area, restrooms and the Sacramento Softball Complex.

The proposed project would replace Renfree Field, associated infrastructure, and the northwest portion of the existing western parking lot and associated infrastructure such as bleachers, bullpens, shaded dugouts, lighting, and connecting sidewalks. The baseball fields would be oriented opposite each other and a 210-foot-by-330-foot soccer field would be striped and overlap the outfields. The northern portion of the existing western parking lot would be redesigned to include a full-sized asphalt basketball court and two pickleball courts with benches and fencing. The southern portion of the existing western parking lot would be redesigned to accommodate an approximately 36-space vehicle parking lot with two-way access via Bridge Road. The proposed on-site walkway and right-of-way improvements along Auburn Boulevard (from the existing children's playground west across Bridge Road to the edge of the Owl Creek riparian area) would interconnect the new and existing park features. Physical environmental changes associated with construction activities would include vegetation, tree, and asphalt removal where site grading and construction would occur. Associated construction activities would include sidewalk construction along the north side of Auburn Boulevard to the edge of the Owl Creek riparian area; the extension of new utilities for electrical service, domestic and irrigation water services, and storm drainage; landscaping; and removal of imported soils from west side of Bridge Road (i.e., Owl Creek Terrace Grading) including grading and hydroseeding.

The evaluation of project impacts was conducted as recommended in the Sacramento Metropolitan Air Quality Management District (SMAQMD) Guide to Air Quality Assessment in Sacramento County California Environmental Quality Act (CEQA) Guide (SMAQMD 2023), which is broken down by chapters covering the environmental review, construction, operations, toxic air contaminants, greenhouse gases, odors, and cumulative components and are incorporated into this technical document by reference.

2 PROJECT LOCATION AND DESCRIPTION

2.1 Project Location

The proposed project is located in the city of Sacramento, Sacramento County, California (Figure 1). The project site is approximately 8.33 acres and is located at 3615 Auburn Boulevard. The project site is located near the Bridge Road and Auburn Boulevard intersection and contains a section of Bridge Road.

The project site is located within the larger Del Paso Regional Park and is surrounded by parkland and recreational fields. Renfree Field is bounded by the natural areas of Del Paso Regional Park to the East Arcade Creek and Park Road to the north, Auburn Boulevard to the south, and Owl Creek and the Science Center to the west. Arcade Creek and a riparian buffer zone maintained as a natural area runs through the northern edge of the park, an area that is largely maintained as natural oak woodland (Figure 2).

Adjacent properties to Renfree Field are primarily in unincorporated Sacramento County and are composed of a residential neighborhood to the north along the north side of Park Road, commercial properties to the east of the Auburn Boulevard on- and off-ramps, a mix of residential and commercial properties to the south along the south side of Auburn Boulevard, and the former location of the Discovery Science and Space Museum to the west (as well as other areas of the larger Del Paso Regional Park). Immediately south of the project site is a Quik Stop gasoline station and rest stop, at the southeast corner of Auburn Boulevard and Annadale Lane intersection. Arcade Fundamental Middle School is located 2,100 feet southwest of the project site, and Mira Loma High School is located approximately 2,600 feet south of the project site. The Sacramento McClellan Airport is approximately 1.3 miles to the northwest (Figure 2).

Renfree Field is currently developed as a public park with a baseball field, a playground, and two parking lots including a 126-space parking lot on the west side accessed via Auburn Boulevard and Bridge Road, and a 21-space parking lot on the east side of Renfree Field accessed directly from Auburn Boulevard. The project site contains a walking trail and an equestrian trail loop that connects to the larger Del Paso Regional Park. The project site terrain is generally level. Existing vegetation is composed of turf grass on the baseball field, and non-native deciduous trees around the parking lots and playground area. The perimeter of the project site contains Valley Oak woodland.

The proposed project would renovate Renfree Field with two baseball fields (Field 1 and Practice Field 2) with an overlapping outfield area along the existing baseball field's first base line between the play structure and eastern parking lot. Practice Field 2 would be located north of the eastern parking lot and would have 30-foot backstop fencing. A 210-foot-by-330-foot soccer field would be striped and overlap in the outfield area. Associated infrastructure such as bleachers, bullpens, shaded dugouts, lighting, and connecting sidewalks would be replaced. The northern portion of the western parking lot would be redesigned to include a full-sized asphalt basketball court and two pickleball courts with benches and fencing. The southern portion of the existing western parking lot would be redesigned to accommodate an approximately 77-space vehicle parking lot with two-way access via Bridge Road. The proposed on-site walkway and right-of-way improvements along the north side of Auburn Boulevard would extend from the east at the existing children's playground west across Bridge Road to the edge of the Owl Creek riparian area and would connect the new and existing park features. The proposed project would also include new lighting for the walkway, parking lot, sports courts, and baseball fields. New lighting for the baseball fields would replace the existing light towers and would be oriented along the perimeter of the field to accommodate lighting for the two baseball fields and soccer field. There would be approximately eight new sports light posts and each would be approximately 60 feet tall (roughly the same height as the existing light towers that would be removed). Hydroseeding of the Owl Creek Terrace would occur immediately west of Bridge Road, where excess soil has been dumped in the past. Sacramento Municipal Utility District and Pacific Gas & Electricity (PG&E) provides electricity and natural gas to Sacramento County through existing infrastructure. Natural gas would not be used during project operation.

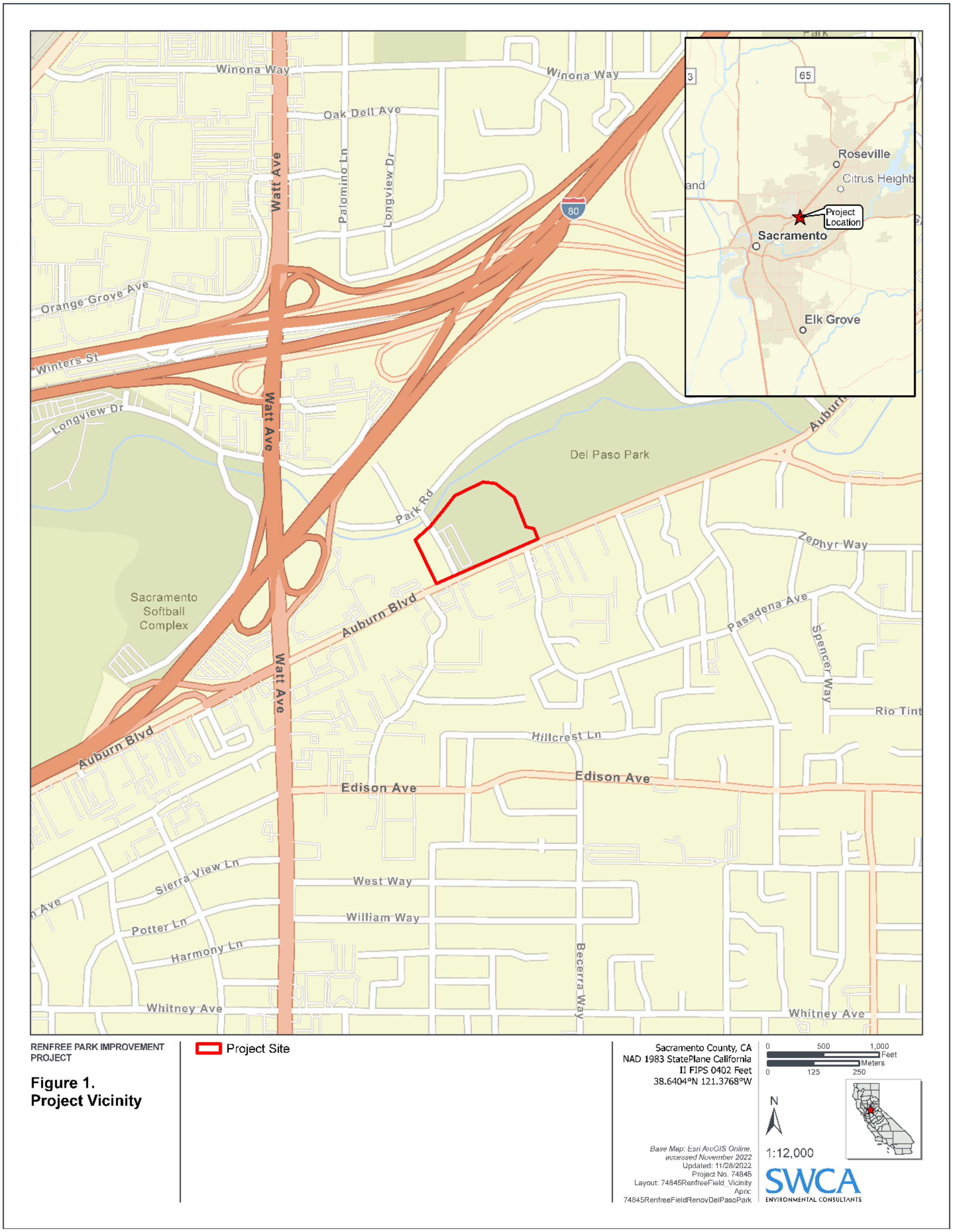

Figure 1. Vicinity map.

Figure 2. Project location.

2.2 Construction Time Frame and Phasing

Construction of the project, from mobilization to the site to final completion, is expected to occur over an approximately 8-10-month period, from March 2023 until the end of December 2023. The project would be constructed in seven phases (some occurring concurrently): 1) demolition (including demolition of paved area, tree removal, clearing of existing fences/bleachers/dugouts, etc. assuming 1,500 tons of material hauled away); 2) site preparation (including clearing and grubbing and hauling away of any remaining material); 3) grading and erosion control; 4) building construction 1 (including site work, irrigation, landscaping); 5) building construction 2 (including plant establishment); 6) paving (paving of parking lot and courts); and 7) finishing (including finishing activities and architectural coatings parking lot and courts). All construction activities, including construction staging of equipment, would be situated entirely within the project site. Typical construction equipment would be used during all phases of project construction and would be stored within the staging area, potentially including graders, excavators, dozers, and backhoes. Once construction is completed the project would be operational sports courts, ball fields and soccer field with associate parking area.

3 ENVIRONMENTAL SETTING

The project is located in Sacramento County within the Sacramento Valley Air Basin (SVAB), which consists of the entirety of Sacramento, Shasta, Tehama, Glenn, Butte, Colusa, Sutter, Yuba, and Yolo Counties; the western portion of Placer County; and the eastern portion of Solano County. The SMAQMD has full jurisdiction within all Sacramento County. The ambient concentrations of air pollutants are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

3.1 Overview of Air Pollution and Potential Health Effects

3.1.1 Criteria Air Pollutants

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of specific pollutants in order to protect the public health and welfare. These pollutants are referred to as "criteria air pollutants" and the national and state standards have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment, either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in the air quality with the Air Basin. The criteria air pollutants for which national and state standards have been promulgated and which are most relevant to current air quality planning and regulation in the Air Basin include carbon monoxide (CO), ozone (O_3), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, sulfates, and hydrogen sulfide (H_2S). These pollutants, as well as volatile organic compounds (VOCs) and toxic air contaminants (TACs), are discussed in the following paragraphs. The national and state criteria pollutants and the applicable ambient air quality standards are listed in Table 1.

3.1.1.1 OZONE

O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and VOCs. The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric ozone) and at the Earth's surface in the troposphere (ozone). The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good" O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2022a). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

3.1.1.2 NITROGEN DIOXIDE

NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2022a).

3.1.1.3 CARBON MONOXIDE

CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions (EPA 2022a).

3.1.1.4 SULFUR DIOXIDE

SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel (EPA 2022a).

3.1.1.5 PARTICULATE MATTER

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) is 10 microns or less in diameter and is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) is 2.5 microns or less in diameter and is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SOx), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in $PM_{2.5}$ and PM_{10} (EPA 2022a).

3.1.1.6 LEAD

Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient (IQ) performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead (EPA 2022a).

3.1.1.7 OTHERS

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. H_2S is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of H_2S include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to H_2S can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

3.1.2 Volatile Organic Compounds

VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the State as TACs. While there are no specific VOC ambient air quality standards, VOC is a prime component (along with NO_x) of the photochemical processes by which such criteria pollutants as O_3, NO_2, and certain fine particles are formed. They are, thus, regulated as “precursors” to the formation of those criteria pollutants.

3.1.3 Toxic Air Contaminants

TACs refer to a diverse group of “non-criteria” air pollutants that can affect human health but have not have ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics “Hot Spots” Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hot spots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

The federal TACs are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, although there are no ambient standards established for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or other acute (short-term) or chronic (long-term) health problems. For TACs that are known or suspected carcinogens, the CARB has consistently found that there are no levels or thresholds below which exposure is risk free. Individual TACs vary greatly in the risks they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another. For certain TACs, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health effects, a similar factor, called a Hazard Index, is used to evaluate risk. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA). Examples of TAC sources include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources. The TAC that is relevant to the implementation of the project include diesel particulate matter (DPM).

DPM was identified as a TAC by the CARB in August 1998 (CARB 1998). DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 40% of the statewide total, with an additional 57% attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3% of emissions, include shipyards, warehouses, heavy-equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities.

Exposure to DPM can have immediate health effects. DPM can have a range of health effects including irritation of eyes, throat, and lungs, causing headaches, lightheadedness, and nausea. Exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. Children, the elderly, and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. In California, DPM has been identified as a carcinogen.

CARB has adopted and implemented a number of regulations to reduce emissions of DPM from stationary and mobile sources. Several of these regulatory programs affect medium- and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles, including those used at construction sites. The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. Therefore, as of January 1, 2023 all trucks and buses are 2010 or newer model year engines.

Naturally occurring asbestos areas are identified based on the type of rock found in the area. Asbestos-containing rocks found in California are ultramafic rocks, including serpentine rocks. Asbestos has been designated a TAC by the CARB and is a known carcinogen. When this material is disturbed in connection with construction, grading, quarrying, or surface mining operations, asbestos-containing dust can be generated. Exposure to asbestos can result in adverse health effects such as lung cancer, mesothelioma (cancer of the linings of the lungs and abdomen), and asbestosis (scarring of lung tissues that results in constricted breathing) (Van Gosen and Clinkenbeard 2011).

Naturally Occurring Asbestos (NOA) is prevalent in at least 44 of California's 58 counties. Asbestos is the name for a group of naturally occurring silicate minerals. Asbestos may be found in serpentine, other ultramafic and volcanic rock. When rock containing NOA is broken or crushed, asbestos may become released and become airborne, causing a potential health hazard. To reduce exposure to asbestos when these soils are disturbed CARB adopted the Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying and Surface Mining Operations. This statewide regulation is applicable to grading or any other projects disturbing soil in areas of California where asbestos may exist, as determined by the California Geological Survey (CGS). The ATCM applies to any size construction project although there are additional notification requirements for projects that exceed one acre. In SMAQMD, prior to any construction, owners or operators must either apply for an Asbestos Dust Mitigation Plan (ADMP) or test out of the ATCM requirements with a Geologic Evaluation. Areas and parcels moderately likely to contain naturally occurring asbestos are located in the eastern parts of Sacramento County, Folsom and Rancho Murieta. The project is not located in a geologic setting with a potential to host asbestos and, therefore, an asbestos will not be an issue for this project (CARB 2000a).

Table 1. State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
			Primary	Secondary
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m³)	--	Same as Primary
	8 hour	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)	
Respirable particulate matter (PM_{10})	24 hour	50 µg/m³	150 µg/m³	Same as Primary
	Annual mean	20 µg/m³	--	
Fine particulate matter ($PM_{2.5}$)	24 hour	--	35 µg/m³	Same as Primary
	Annual mean	12 µg/m³	12.0 µg/m³	15 µg/m³
Carbon monoxide (CO)	1 hour	20 ppm (23 µg/m³)	35 ppm (40 mg/m³)	--
	8 hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	--
Nitrogen dioxide (NO_2)	1 hour	0.18 ppm (339 µg/m³)	100 ppb (188 µg/m³)	--
	Annual mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	Same as Primary
Sulfur dioxide (SO_2)	1 hour	0.25 ppm (655 µg/m³)	75 ppb (196 µg/m³)	--
	3 hour	--	-	0.5 ppm (1300 µg/m³)
	24 hour	0.04 ppm (105 µg/m³)	0.14 ppm	--
	Annual mean	--	0.030 ppm	--
Lead	30-day average	1.5 µg/m³	-	--
	Calendar quarter	--	1.5 µg/m³	Same as Primary
	Rolling 3-month average	--	0.15 µg/m³	Same as Primary
Visibility reducing particles	8 hour	10-mile visibility standard, extinction of 0.23 per kilometer	No National Standards	
Sulfates	24 hour	25 µg/m³		
Hydrogen sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m³)		
Vinyl chloride	24 hour	0.01 ppm (265 µg/m³)		

Source: CARB (2016)
Notes: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter; -- = no standard.
National annual $PM_{2.5}$ primary standard is currently being proposed to be reduced to 9-10 µg/m³

3.1.4 Odors

A qualitative assessment should be made as to whether a project has the potential to generate odorous emissions of a type or quantity that could meet the statutory definition for nuisance, i.e., odors "which cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property" (Health & Safety Code § 41700). While offensive odors usually do not cause any physical harm, they can be unpleasant enough to lead to considerable distress among the public and generate citizen complaints to local governments and the SMAQMD. The Air District's Rule 402 (Nuisance) also prohibits any person or source from emitting air contaminants that cause detriment, nuisance, or annoyance to a considerable number of persons or the public. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

3.2 Existing Air Quality Conditions in the Project Area

3.2.1 Regional Air Quality

The SVAB is a relatively flat area bordered by the north Coast Ranges to the west and the northern Sierra Nevada to the east. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento–San Joaquin Delta (Delta) from the San Francisco Bay Area.

The Mediterranean climate type of the SVAB is characterized by hot, dry summers and cool, rainy winters. During the summer, daily temperatures range from 50 degrees Fahrenheit (°F) to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature. Most precipitation in the area results from air masses that move in from the Pacific Ocean, usually from the west or northwest, during the winter months. More than half the total annual precipitation falls during the winter rainy season (November through February); the average winter temperature is a moderate 49°F. Also characteristic of SVAB winters are periods of dense and persistent low-level fog, which are most prevalent between storms. The prevailing winds are moderate in speed and vary from moisture-laden breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which leads to the entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. The highest frequency of poor air movement occurs in the fall and winter when high-pressure cells are often present over the SVAB. The lack of surface wind during these periods, combined with the reduced vertical flow caused by a decline in surface heating, reduces the influx of air and leads to the concentration of air pollutants under stable metrological conditions. Surface concentrations of air pollutant emissions are highest when these conditions occur in combination with agricultural burning activities or with temperature inversions, which hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground.

May through October is ozone season in the SVAB. This period is characterized by poor air movement in the mornings with the arrival of the Delta sea breeze from the southwest in the afternoons. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between reactive organic gases (ROG) and NO_X, which result in ozone formation. Typically, the Delta breeze transports air pollutants northward out of the SVAB; however, a phenomenon known as the Schultz Eddy prevents this from occurring during approximately half of the time from July to September. The Schultz Eddy phenomenon causes the wind to shift southward and blow air pollutants back into the SVAB. This phenomenon exacerbates the concentration of air pollutant emissions in the area and contributes to the area violating the ambient air quality standards.

The local meteorology of the City and surrounding area is represented by measurements recorded at the Western Regional Climate Center Sacramento Executive Airport Station. The normal annual precipitation is approximately 17.24 inches. January temperatures range from a normal minimum of 37.8°F to a normal maximum of 53.5°F. July temperatures range from a normal minimum of 58.2°F to a normal maximum of 92.7°F (WRCC 2016). The prevailing wind direction is from the south (WRCC 2002).

3.2.2 Regional Attainment Status

Depending on whether the applicable ambient air quality standards are met or exceeded, the air basin is classified on a federal and state level as being in "attainment" or "nonattainment." The EPA and CARB determine the air quality attainment status of designated areas by comparing ambient air quality measurements from state and local ambient air monitoring stations with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). These designations are determined on a pollutant-by-pollutant basis. Consistent with federal requirements, an unclassifiable/unclassified designation is treated as an attainment designation. The Sacramento County region of the SMAQMD is currently designated a nonattainment area for California and National 8-hour O_3 and National 24-hour $PM_{2.5}$. Therefore, is considered a "attainment/unclassified" area for all other pollutants (EPA 2023a).

3.2.3 Local Air Quality

Air pollutants emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial and industrial activity, space and water heating, landscape maintenance, consumer products, and mobile sources primarily consisting of automobile traffic. Area-wide sources are the primary source of pollutants in the local vicinity.

3.2.3.1 EXISTING CRITERIA POLLUTANT LEVELS AT NEARBY MONITORING STATIONS

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project area have been documented and measured by CARB. The nearest station is the Sacramento – Del Paso Manor Monitoring Station, which monitors O_3, NO_2, PM_{10}, and $PM_{2.5}$. Data from this monitoring stations are summarized in Table 2, Ambient Air Quality Monitoring Summary. The data show violations of the state and federal O_3 standards and federal $PM_{2.5}$ standard. In recent years, California has been plagued by an unprecedented number of wildfires that have produced dense palls of smoke in the Bay Area and beyond. The air quality data collected by CARB in Table 2 include exceptional events, including wildfires. The GHG inventory for California for years 2015–2019 is presented in Table 3. The 2016 GHG inventory for Sacramento from the City of Sacramento Climate Action and Adaptation Plan is presented in Table 4. The national and state criteria pollutants and the applicable ambient air quality standards are listed above in Table 1.

Table 2. Summary of Ambient Air Quality Monitoring Summary

Pollutant		Year		
		2019	**2020**	**2021**
O3	Maximum 1-hour concentration (ppm)	0.087	0.120	0.110
	Days exceeding CAAQS (0.09 ppm)	0	4	7
	Maximum 8-hour concentration (ppm)	0.069	0.085	0.091
	Days exceeding NAAQS (0.07 ppm)	0	10	17
	Days exceeding CAAQS (0.07 ppm)	0	10	17
NO2	Maximum 1-hour concentration (ppb)	0.051	0.046	0.024
	Days exceeding CAAQS (0.18 ppm)	0	0	0
PM10	Maximum 24-hour concentration (µg/m^3)	53.0	188.0	63.0
	Days exceeding NAAQS (50 µg/m^3)	0	1	0
PM2.5	Maximum 24-hour concentration (µg/m^3)	41.4	147.3	90.0
	Days exceeding NAAQS (35 µg/m^3)	3	27	5

Source: CARB (2023a)
Notes: AAM = annual arithmetic mean; ppm = parts per million; µg/m^3 = micrograms per cubic meter
Data for O3, NO2, PM10 and PM2.5 was obtained from the Sacramento – Del Paso Manor Monitoring Station

Table 3. California Greenhouse Gas Inventory

Parameter	Unit*	Year				
		2015	**2016**	**2017**	**2018**	**2019**
Transportation	MMT CO_2e	166.2	169.8	171.2	169.6	166.1
	Percentage	38.5%	40.4%	41.2%	40.7%	40.6%
Electric power	MMT CO_2e	84.8	68.6	62.1	63.1	58.8
	Percentage	19.6%	16.3%	14.9%	15.2%	14.4%
Industrial	MMT CO_2e	90.3	89	88.8	89.2	88.2
	Percentage	20.9%	21.2%	21.4%	21.4%	21.5%
Commercial and residential	MMT CO_2e	38.8	40.6	41.3	41.4	43.8
	Percentage	9.0%	9.7%	9.9%	9.9%	10.7%
Agriculture	MMT CO_2e	33.5	33.3	32.5	32.7	31.8
	Percentage	7.8%	7.9%	7.8%	7.9%	7.8%
High global warming potential (GWP)	MMT CO_2e	18.6	19.2	20	20.4	20.6
	Percentage	4.3%	4.6%	4.8%	4.9%	5.0%
Total Net Emissions	MMT CO_2e	**432.2**	**420.5**	**415.9**	**416.4**	**409.3**

Source: California GHG Inventory for 2000–2019 (CARB 2021)
* MMT CO2e = million metric tons carbon dioxide equivalent

Table 4. Sacramento 2016 Greenhouse Gas Inventory

Parameter	Unit*	Year 2016
Residential Electricity	MMT CO_2e	0.318
Residential Natural Gas	MMT CO_2e	0.318
Industrial and Commercial Electricity	MMT CO_2e	0.490
Commercial Natural Gas	MMT CO_2e	0.154
District Natural Gas	MMT CO_2e	0.018
Transportation	MMT CO_2e	1.93
Generated Waste	MMT CO_2e	0.134
Waste in Place	MMT CO_2e	0.027
Wastewater	MMT CO_2e	0.020
Water	MMT CO_2e	0.010
Total Net Emissions	MMT CO_2e	**3.42**

Source: City of Sacramento Climate Action and Adaptation Plan (City of Sacramento 2023)
* MMT CO2e = million metric tons carbon dioxide equivalent

3.2.3.2 EXISTING HEALTH RISK IN THE PROJECT VICINITY

OEHHA, on behalf of the California EPA (CalEPA), provides a screening tool called CalEnviroScreen that can be used to help identify California communities disproportionately burdened by multiple sources of pollution. The project is located in Census Tract 6067007504, which has 2,081 people. To determine the existing level of TACs in the area, the CalEnviroScreen indicator that represents modeled air concentration of chemical releases from large facility emissions in and nearby the census tract was identified. This indicator takes the air concentration and toxicity of the chemical to determine the toxic release score. The data is averaged over 2017 to 2019 and the toxic release indicator scores range from 0 to 96,985. The score for this census tract is 78.82 which means the toxic release percentile for this census tract is 21, meaning it is higher than 21% of the census tracts in California (OEHHA 2021).

The CalEnviroScreen for diesel particulate matter was also determined, as diesel particulate matter is also a TAC. This indicator represents how much diesel particulate matter is emitted into the air within and near the populated parts of the census tracts. The data from 2016 indicate that sources of diesel PM within and nearby the populated parts of this census tract emit 0.307 tons per year. The diesel PM percentile for this census tract is 77, meaning it is higher than 77% of the census tracts in California. Diesel emissions in California range between 0 - 15 tons per year. These indicators show that health risk in the project vicinity is moderate. Overall, according to CalEnviroScreen, the project is located in the 63rd percentile, which means the project area is slightly higher than average in comparison to other communities within California (OEHHA 2021).

3.2.3.3 SENSITIVE USES

Some population groups, including children, elderly, and acutely and chronically ill persons (especially those with cardiorespiratory diseases), are considered more sensitive to air pollution than others. A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. The following are land uses where sensitive receptors are typically located:

- schools, playgrounds and childcare centers
- long-term health care facilities
- rehabilitation centers
- convalescent centers
- hospitals
- retirement homes
- residences

Construction equipment, vehicle, and material movement activities would occur throughout the project site. During the approximately 10-month construction period, work activities would take place between the hours of 7:00 a.m. and 6:00 p.m., Monday to Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday. The closest sensitive receptors to the project site include the single-family residences approximately 230 feet north-northwest of the project site along Park Boulevard, or the Sunset Gardens apartment complex, which is approximately 300 feet southeast of the project site across Auburn Boulevard. There is a small playground located approximately 30 feet south of the primary work areas where field renovations and would occur. The playground would remain open during project construction, although it is unlikely to attract playground users during the day when construction activities are happening. The playground is an existing park feature and users would be exposed to TACS only while recreating on the playground, which represents less exposure than nearby residents. However, implementation of the proposed project would not result in the long-term operation of any emission sources that would adversely affect nearby sensitive receptors. Short-term (8-10 months) construction activities could result in temporary increases in pollutant concentrations. The construction-related emissions would be short term and located at different locations within the project site. Although construction would occur over 8-10 months, construction at any one site would last for a much shorter time. The limited duration and limited quantities of construction emissions ensure that no individual receptor would be exposed to substantial pollutant concentrations. During construction, the SMAQMD Best Management Practices (BMPs) would minimize construction impacts by reducing dust and exhaust emissions.

3.3 Greenhouse Gas Setting

Global climate change refers to the changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and storms. Global warming, a related concept, is the observed increase in the average temperature of the Earth’s atmosphere and oceans in recent decades. There is a general scientific consensus that global climate change is occurring, caused in whole or in part by increased emissions of GHGs that keep the Earth’s surface warm by trapping heat in the Earth’s atmosphere, in much the same way as glass traps heat in a greenhouse. The Earth’s climate is changing because human activities, primarily the combustion of fossil fuels, are altering the chemical composition of the atmosphere through the buildup of GHGs. GHGs are released by the combustion of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect. While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy.

Regarding the adverse effects of global warming, as reported by Assembly Bill 2538: “Global warming poses a serious threat to the economic well-being, public health, natural resources and the environment of California.” Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the States in carbon dioxide (CO_2) emissions from fossil fuel consumption per unit of gross state product. However, in terms of total CO_2 emissions California is second only to Texas in the nation and is the 16th largest source of climate change emissions in the world, exceeding most nations.

3.3.1 Greenhouse Gas Background

GHGs include CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Carbon is the most abundant GHG. Other GHGs are less abundant but have higher global warming potential than CO_2. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. The primary GHGs attributed to global climate change are described below.

3.3.1.1 CARBON DIOXIDE (CO_2)

In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants, volcanic outgassing, decomposition of organic matter, and evaporation from the oceans. Anthropogenic sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Anthropogenic sources of CO_2 amount to over 30 billion tons per year, globally (Friedlingstein et al. 2022). Natural sources release substantially larger amounts of CO_2. Nevertheless, natural removal processes, such as photosynthesis by land and ocean-dwelling plant species, cannot keep pace with this extra input of human-made CO_2, and, consequently, the gas is building up in the atmosphere.

3.3.1.1.1 Methane (CH_4)

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California.

3.3.1.1.2 Nitrous Oxide (N_2O)

Nitrous oxide is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion produce N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California.

3.3.1.1.3 Hydrofluorocarbons, Perfluorocarbons, Sulfur Hexafluoride

Hydrofluorocarbons (HFCs) are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol (1987), an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion. Perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6) are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no primary aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs.

The magnitude of the impact on global warming differs among the GHGs. The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential (GWP). GWPs are one type of simplifies index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system, expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG emissions are typically measured in terms of pounds or tons of CO_2 equivalents (CO_2e). GWP are based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO_2. The larger GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. HFCs, PFCs, and SF_6 have a greater "global warming potential" than CO_2. In other words, these other GHGs have a greater contribution to global warming than CO_2 on a per-mass basis. However, CO_2 has the greatest impact on global warming because of the relatively large quantities of CO_2 emitted into the atmosphere.

A summary of the atmospheric lifetime and GWP of selected gases is presented in Table 5. As indicated in this table, GWPs range from 1 to 23,500 based on IPCC Assessment Reports. IPCC has released three assessment reports (AR4, AR5, and AR6) with updated GWPs, however, CARB reports the statewide GHG inventory using the AR4 GWPs, which is consistent with international reporting standards. By applying the GWP ratios, project-related equivalent mass of CO_2, denoted as CO_2e emissions can be tabulated in metric tons per year.

Table 5. Global Warming Potentials

Greenhouse Gas	GWP Values for 100-year Time Horizon		
	AR4*	AR5	AR6
Carbon dioxide (CO_2)	1	1	1
Methane (CH_4)	25	28	Fossil origin – 29.8 Non-fossil origin – 27.2
Nitrous oxide (N_2O)	298	265	273
Select hydrofluorocarbons (HFCs)	124–14,800	4–12,400	–
Sulfur hexafluoride (SF_6)	22,800	23,500	–

Sources: IPCC (2007, 2013).

* For consistency with the EPA and its Inventory of Greenhouse Gas Reporting, we have represented values from AR4 of the IPCC report in this report.

3.3.2 Greenhouse Gas Emissions Inventories

3.3.2.1 UNITED STATES GHG EMISSIONS

Per the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2021* (EPA 2023), total U.S. GHG emissions have decreased by 6.6% from 1990 to 2020; 2005 emissions were 15.8% above 1990 levels (EPA 2022b). The largest source of GHG emissions from human activities in the United States is from burning of fossil fuels for electricity, heat, and transportation. The latest national GHG emissions are for calendar year 2021, in which total gross U.S. GHG emissions were reported at 6,340.2 million metric tons carbon dioxide equivalent (MMT CO_2e). Emissions decreased from 2019 to 2021 by 277.7 MMT CO_2e and net emissions (including sinks) were 5,586.0 MMT CO_2e (EPA 2023).

3.3.2.2 STATEWIDE GHG EMISSIONS

According to California's 2000–2019 GHG emissions inventory, California emitted 409.3 MMT CO_2e in 2019 (CARB 2021). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high global-warming potential substances, and recycling and waste. The California GHG emission source categories (as defined in CARB's 2008 Scoping Plan) and their relative contributions in 2019 are presented in Table 3. Total GHG emissions in 2019 were approximately 22.9 MMT CO_2e less than 2016 emissions. Based on data presented, the 2016 statewide GHG inventory fell below 1990 levels, consistent with AB 32. The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California will continue to reduce emissions below the 2020 target of 431 $MTCO_2e$ (CARB 2022a).

3.3.2.3 COUNTY GHG EMISSIONS

According to the City of Sacramento Climate Action and Adaptation Plan, Sacramento's GHG emissions inventory shows the city of Sacramento emitted 3.42 MMT CO_2e in 2016 (City of Sacramento 2023). The sources of GHG emissions in Sacramento include transportation, electricity, natural gas, waste and wastewater. The Sacramento GHG emission source categories and their relative contributions in 2016 are presented in Table 4. Sacramento achieved a 20% reduction below 2005 levels in 2016, exceeding the 2020 target. Based on data presented, the 2016 Sacramento GHG inventory fell below 1990 levels, consistent with AB 32. The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that Sacramento will continue to reduce emissions below the 2020 target of 431 $MTCO_2e$ (City of Sacramento 2023).

4 REGULATORY SETTING

Federal, state, and local agencies have set ambient air quality standards for certain air pollutants through statutory requirements and have established regulations and various plans and policies to maintain and improve air quality, as described below.

4.1 Federal

4.1.1 Federal Clean Air Act

4.1.1.1 AIR QUALITY

The federal Clean Air Act (CAA), which was passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The CAA delegates primary responsibility for clean air to the EPA. The EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. Under the act, the EPA has established the NAAQS for six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. Ozone (O_3), CO, NO_2, SO_2, lead, and particulate matter (PM_{10} and $PM_{2.5}$) are the six criteria air pollutants. Ozone is a secondary pollutant; NO_X and VOCs are of particular interest as they are precursors to ozone formation. The NAAQS are divided into primary and secondary standards; the primary standards are set to protect human health within an adequate margin of safety, and the secondary standards are set to protect environmental values, such as plant and animal life. The standards for all criteria pollutants are presented in Table 1.

The CAA requires the EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The act also mandates that the State submit and implement a State Implementation Plan for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met.

4.1.1.2 GREENHOUSE GAS EMISSIONS

The Supreme Court of the United States (SCOTUS) ruled in Massachusetts v. Environmental Protection Agency, 127 S.Ct. 1438 (2007), that CO_2 and other GHGs are pollutants under the federal CAA, which the EPA must regulate if it determines they pose an endangerment to public health or welfare. SCOTUS did not mandate that the EPA enact regulations to reduce GHG emissions. Instead, SCOTUS found that the EPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

On April 17, 2009, the EPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009~0171. The EPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes." The EPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the EPA Administrator on December 7, 2009.
The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010. While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the EPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

On July 20, 2011, the EPA published its final rule deferring GHG permitting requirements for CO_2 emissions from biomass-fired and other biogenic sources until July 21, 2014. Environmental groups challenged the deferral. In September 2011, EPA released an "Accounting Framework for Biogenic CO2 Emissions from Stationary Sources," which analyses accounting methodologies and suggests implementation for biogenic CO_2 emitted from stationary sources.

On April 4, 2012, the EPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired generating units larger than 25 megawatts are required to limit emissions to 1,000 pounds of CO_2 per megawatt-hour on an average annual basis, subject to certain exceptions.

On April 17, 2022, the EPA issued emission rules for oil production and natural gas production and processing operations, which are required by the CAA under Title 40 of the Code of Federal Regulations (CFR) Parts 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that currently are not regulated at the federal level.

4.1.2 Toxic Substance Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. TSCA became law on October 11, 1976, and became effective on January 1, 1977. The TSCA authorized the EPA to secure information on all new and existing chemical substances, as well as to control any of the substances that were determined to cause unreasonable risk to public health or the environment.

Congress later added additional titles to the Act, with this original part designated at Title I – Control of Hazardous Substances. TSCA regulatory authority and program implementation rests predominantly with the federal government (i.e., the EPA). However, the EPA can authorize States to operate their own, EPA-authorized programs for some portions of the statute. TSCA Title IV allows States the flexibility to develop accreditation and certification programs and work practice standards for lead-related inspection, risk assessment, renovation, and abatement that are at least as protective as existing federal standards.

4.1.3 National Emission Standards for Hazardous Air Pollutants (Asbestos)

The EPA's air toxics regulation for asbestos is intended to minimize the release of asbestos fibers during activities involving the handling of asbestos. Asbestos was one of the first hazardous air pollutants regulated under the air toxics program as there are major health effects associated with asbestos exposure (lung cancer, mesothelioma, and asbestosis). On March 31, 1971, the EPA identified asbestos as a hazardous pollutant, and on April 6, 1973, EPA promulgated the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), currently found in 40 CFR 61(M). The Asbestos NESHAP has been amended several times, most comprehensively in November 1990. In 1995, the rule was amended to correct cross-reference citations to Occupational Safety and Health Administration, Department of Transportation, and other EPA rules governing asbestos. Air toxics regulations under the CAA have guidance on reducing asbestos in renovation and demolition of buildings; institutional, commercial, and industrial building; large-scale residential demolition; exceptions to the asbestos removal requirements; asbestos control methods; waste disposal and transportation; and milling, manufacturing, and fabrication.

4.2 State

4.2.1 California Clean Air Act

The California Clean Air Act (CCAA) was adopted by the CARB in 1988. The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. The CARB and local air districts are responsible for achieving CAAQS, which are to be achieved through district-level AQMPs that would be incorporated into the State Implementation Plan. In California, the EPA has delegated authority to prepare State Implementation Plans to CARB, which in turn, has delegated that authority to individual air districts. Each district plan is required to either 1) achieve a 5% annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or 2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

The State of California began to set its ambient air quality standards (i.e., CAAQS) in 1969, under the mandate of the Mulford-Carrell Act. The CCAA requires all air districts of the state to achieve and maintain the CAAQS by the earliest practical date. Table 1 shows the CAAQS currently in effect for each of the criteria pollutants, as well as the other pollutants recognized by the State. As shown in Table 1, the CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, H_2S, vinyl chloride, and visibility-reducing particles.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards

- Title 24, Part 6, CCR: Building Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

4.2.2 California Code of Regulations

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended, or repealed by the state agencies pursuant to the Administrative Procedure Act. The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operation of any stationary, diesel-fueled, compression-ignition engine shall meet specified fuel and fuel additive requirements and emission standards.

4.2.3 Toxic Air Contaminants Regulations

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act of 1983 (AB 1807, also known as the Tanner Air Toxics Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588 – Connelly). In the early 1980s, the CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Air Toxics Act (AB 1807) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks (CARB 2011).

In August 1998, CARB identified DPM emissions from diesel-fueled engines as a TAC. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles (CARB 2000b). The goal of the plan is to reduce diesel PM_{10} (inhalable particulate matter) emissions and the associated health risk by 75% in 2010, and by 85% by 2020. The plan identified 14 measures that target new and existing on-road vehicles (e.g., heavy-duty trucks and buses, etc.), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps, etc.), and stationary engines (e.g., stand-by power generators, etc.). During the control measure phase, specific statewide regulations designed to further reduce DPM emissions from diesel-fueled engines and vehicles were evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions. The project would be required to comply with applicable diesel control measures.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools.

- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate.

4.2.4 Executive Order S-3-05, Executive Order B-30-15, and Executive Order B-55-18

In 2005, the governor issued EO S-3-05, establishing statewide GHG emissions reduction targets, as well as a process to ensure the targets are met. The order directed the Secretary of the CalEPA to report every 2 years on the State's progress toward meeting the governor's GHG emission reduction targets. The statewide GHG targets established by Executive Order S-3-05 are as follows:

- By 2010, reduce to 2000 emission levels,
- By 2020, reduce to 1990 emission levels, and
- By 2050, reduce to 80 percent below 1990 levels.

EO B-30-15, issued by Governor Brown in April 2015, established an additional statewide policy goal to reduce GHG emissions 40% below their 1990 levels by 2030. Reducing GHG emissions by 40% below 1990 levels in 2030 and by 80% below 1990 levels by 2050 (consistent with EO S-3-05) aligns with scientifically established levels needed in the United States to limit global warming below 2 degrees Celsius.

The State Legislature adopted equivalent 2020 and 2030 statewide targets in the California Global Warming Solutions Act of 2006 (also known as AB 32) and Senate Bill (SB) 32, respectively, both of which are discussed below. However, the legislature has not yet adopted a target for the 2050 horizon year. As a result of EO S-3-05, the California Action Team (CAT), led by the Secretary of CalEPA, was formed. The CAT is made of representatives from a number of state agencies and was formed to implement global warming emission reduction programs and to report on the progress made toward meeting statewide targets established under the EO. The CAT reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the EO.

The CAT stated that "smart" land use is an umbrella term for strategies that integrate transportation and land use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.

EO B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve caron neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, CARB would work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal, as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

4.2.5 Assembly Bill 32 — California Global Warming Solution Act

The California Global Warming Solutions Act of 2006 (also known as AB 32) commits the State to achieving the following:

- By 2010, reduce to 2000 GHG emission levels, and
- By 2020, reduce to 1990 levels.

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that the CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reductions, AB 32 requires CARB to adopt rules and regulations in an open, public process that achieves the maximum technologically feasible and cost-effective GHG reductions.

SB 32, signed September 8, 2016, updates AB 32 to include an emissions reduction goal for the year 2030. Specifically, SB 32 requires CARB to ensure that statewide GHG emissions are reduced to 40% below the 1990 level by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

4.2.6 Climate Change Scoping Plan

In 2008, CARB approved a Climate Change Scoping Plan, as required by AB 32. Subsequently, CARB approved updates of the Climate Change Scoping Plan in 2014 (First Update) and 2017 (2017 Update), with the 2017 Update considering SB 32 (adopted in 2016) in addition to AB 32 (CARB 2014, 2017a). The First Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals (to the level of 427 MMT CO_2e) defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use. In November 2022, the final 2022 Scoping Plan Update and Appendices was released. This 2022 Scoping Plan Update assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045 (CARB 2022c). The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

4.2.7 Assembly Bill 197

AB 197, signed September 8, 2016, is a bill linked to SB 32 that prioritizes efforts to reduce GHG emissions in low-income and minority communities. AB 197 requires the CARB to make available, and update at least annually on its website, the emissions of GHGs, criteria pollutants, and TACs for each facility that reports to CARB and air districts. In addition, AB 197 adds two members of the legislature to the CARB board as ex officio, non-voting members, and also creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the legislature concerning the State's programs, policies, and investments related to climate change.

4.2.8 Cap-and-Trade Program

The 2008 Climate Change Scoping Plan identified a cap-and-trade program as one of the strategies for California to reduce GHG emissions. The cap-and-trade program is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013, and apply to large electric power plants and large industrial plants. In 2015, fuel distributors, including distributors of heating and transportation fuels, also became subject to the cap-and-trade rules. At that stage, the program will encompass around 360 businesses throughout California and nearly 85 percent of the state's total GHG emissions. Covered entities subject to the cap-and-trade program are sources that emit more than 25,000 metric tons CO_2e ($MTCO_2e$) per year. Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule).

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions and are free to buy and sell allowances on the open market. California held its first auction of GHG allowances on November 14, 2012. California's GHG cap-and-trade system is projected to reduce GHG emissions to 1990 levels by the year 2020 and would achieve an approximate 80 percent reduction from 1990 levels by 2050.

4.2.9 Assembly Bill 1493 (Pavley I)

AB 1493, passed in 2002, requires the development and adoption of regulations to achieve the maximum feasible reduction in GHG emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the state. CARB originally approved regulations to reduce GHG from passenger vehicles in September 2004, which took effect in 2009. On September 24, 2009, CARB adopted amendments to these regulations that reduce GHG emissions and new passenger vehicles from 2009 through 2016. Although setting emission standards on automobiles is solely the responsibility of the EPA, the federal CAA allows California to set state-specific emission standards on automobiles, and the State first obtains a waiver from the EPA. The EPA granted California that waiver until July 1, 2009. The comparison between the AB 1493 standards and the federal Corporate Average Fuel Economy standards was completed by CARB, and the analysis determined the California emission standards were 16% more stringent through the 2016 model year and 18% more stringent for the 2020 model year. CARB is also committed to further strengthening these standards beginning with 2020 model year vehicles, to obtain a 45% GHG reduction in comparison to 2009 model years.

In March 2020, the EPA issued the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE) which would roll back feel economy standards and revoke California's waiver. Under this rule, EPA would amend certain average fuel economy and GHG standards for passenger cars covering model years 2021 through 2026. In September 2019, the EPA withdrew the waiver had previously provided in California for the states GHG and Zero Emission Vehicle (ZEV) programs under Section 209 of the Clean Air Act. The withdrawal of the waiver beginning effective on November 26th, 2019. In response, several states including California have a lawsuit challenging the withdrawal of the EPA waiver. These actions continue to be challenged in court. As noted above, on January 20, 2021, President Biden issued an executive order directing all executive departments and agencies to take action, as appropriate, to address federal regulations and other actions taken during the last 4 years that conflict with the administration's climate and environmental justice goals, which include SAFE.

4.2.10 Executive Order S-01-07 (California Low Carbon Fuel Standard)

EO S-01-07, the Low Carbon Fuel Standard (LCFS) (issued January 18, 2007), requires a reduction of at least 10% in the carbon intensity of California transportation fuels by 2020. Regulatory proceedings and implementation of the LCFS was directed to CARB. CARB released a draft version of the LCFS in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day.

The 2017 update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In calculating statewide emissions and targets, the 2017 update has assumed the LCFS be extended to an 18% reduction in carbon intensity beyond 2020. On September 27, 2018, CARB approved a rulemaking package that amended the LCFS to relax the 2020 carbon intensity reduction from 10% to 7.5%, and to require a carbon intensity reduction of 20% by 2030.

4.2.11 Advanced Clean Car Regulations

In 2012, CARB approved the Advanced Clean Cars program, a new emissions control program for model years 2015 through 2025. The components of the advance clean car standards include the Low-Emission Vehicle regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero Emission Vehicle regulation, which requires manufacturers to produce an increasing number of pure ZEVs, with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years period. In March 2017, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV programs for cars and light trucks sold in California through 2025.

4.2.12 Senate Bill 375

This bill requires CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region. If the SCS is unable to achieve the regional GHG emissions reductions targets, then the Metropolitan Planning Organization is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target can be achieved through alternative development patterns, infrastructure, and/or transportation measures.

As required under SB 375, CARB is required to update regional GHG emission targets every 8 years, with last update formally adopted March 2018. As part of the 2018 update, CARB has adopted a passenger vehicle–related GHG reduction target of 19% by 2035 for the SCAG region, which is more stringent than the previous reduction target of 13% for 2035.

4.2.13 Senate Bill 97

Senate Bill 97 (SB 97) was enacted in 2007. SB 97 required Governor's Office of Planning and Research (OPR) to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions (OPR 2008, 2018). Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.

- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions.
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria.
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply and ways to reduce energy demand, including through the use of efficient transportation alternatives.

As part of the administrative rulemaking process, the California Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010. SB 97 applies to any environmental impact report (EIR), negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

4.3 Regional

4.3.1 Sacramento Metro Air Quality Management District

The SMAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the Sacramento County. SMAQMD works with other local air districts in the Sacramento region to maintain the region's portion of the (State implementation plan) SIP for ozone and $PM_{2.5}$. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the CAA requirements to attain and maintain the NAAQS for ozone and particulate matter. SMAQMD has developed a set of guidelines for use by lead agencies when preparing environmental documents. The guidelines contain thresholds of significance for criteria pollutants and TACs, and also make recommendations for conducting air quality analyses. All projects are subject to adopted SMAQMD rules and regulations in effect at the time of construction. Specific rules relevant to the construction of future development under the project may include the following:

- Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions into the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact SMAQMD early to determine whether a permit is required, and to begin the permit application process. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment) with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or CARB portable equipment registration.

- Rule 202: New Source Review. The purpose of this rule is to provide for the issuance of authorities to construct and permits to operate at new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

- Rule 207: Federal Operating Permit. The purpose this rule is to establish an operating permitting system consistent with the requirements of Title V of the US Code and pursuant to 40 FR Part 70.

Stationary sources subject to the requirements of this rule are also required to comply with any other applicable federal, State, or SMAQMD orders, rules, and regulations, including requirements pertaining to prevention of significant deterioration pursuant to Rule 203, requirements to obtain an authority to construct pursuant to Rule 201, or applicable requirements under SMAQMD's new source review rule in the SIP.

- Rule 402: Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause or have natural tendency to cause injury or damage to business or property.

- Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earthmoving activities or any other construction activity to prevent airborne dust from leaving the project site. Fugitive dust controls include the following:

  - Water all exposed surfaces two times daily.

  - Cover or maintain at least 2 feet of freeboard on haul trucks transporting soil, sand, or other loose material on the site.

  - Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day.

  - Limit vehicle speeds on unpaved roads to 15 miles per hour.

  - All roadways, driveways, sidewalks, and parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

  - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes.

  - Maintain all construction equipment in proper working condition according to manufacturers' specifications.

- Rule 442: Architectural Coatings. The purpose of this rule is to limit the emissions of volatile organic compounds from the use of architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within Sacramento County.

- Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of material containing asbestos.

SMAQMD also provides the CEQA Guide with basic construction emission control practices or BMPs. The following Basic Construction Emissions Control Practices are considered feasible for controlling fugitive dust from a construction site. The practices also serve as best management practices, allowing the use of the non-zero particulate matter significance thresholds. The BMPs are as follows:

- Control of fugitive dust is required by District Rule 403 and enforced by District staff.

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

The following practices describe exhaust emission control from diesel powered fleets working at a construction site. California regulations limit idling from both on-road and offroad diesel-powered equipment. The California Air Resources Board (CARB) enforces idling limitations and compliance with diesel fleet regulations.

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1].

Although not required by local or state regulation, many construction companies have equipment inspection and maintenance programs to ensure work and fuel efficiencies.

- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated

4.3.2 City of Sacramento Climate Action Plan

Sacramento's first community Climate Action Plan (CAP), adopted in 2012, was a stand-alone document that was intended to guide City efforts to reduce greenhouse gas emissions and adapt to climate change. In 2015 the CAP was incorporated into the 2035 General Plan. The City of Sacramento is currently updating the Sacramento Climate Action Plan, and integrating an Adaptation Chapter and a Climate Change Vulnerability Assessment, in tandem with the 2040 General Plan Update process. The full Draft Climate Action & Adaptation Plan (CAAP) was released on April 28, 2023 for an extended public review period that will run through August, 2023.

This CAAP provides a pathway for the City of Sacramento to reduce GHG emissions consistent with state goals. In particular, the CAAP Update was developed to exceed the requirements of Senate Bill (SB) 32, which calls for a reduction in statewide GHG emissions 40% below 1990 levels by 2030. The CAAP also demonstrates the City's plan for substantial progress towards consistency with the State of California's statewide policy goals for GHG emission reductions, as enacted by AB1279 and the

California Air Resource Board's 2022 Scoping Plan for Achieving Carbon Neutrality which sets a path to achieve carbon neutrality by 2045 with at least 85% reduction in GHG emissions from 1990 levels.

In addition, this CAAP will fulfill the requirements of the CEQA Guidelines § 15183.5(b) to be a "qualified" GHG reduction plan. This CAAP meets CEQA requirements for qualified GHG reduction plans and will provide the City of Sacramento and its developers a critical tool for streamlining development through 2030 (i.e., the horizon year associated with SB 32). The CAAP is also consistent with the City's General Plan Update, using the same population, housing, and VMT growth projections. By developing a qualified GHG reduction plan the City has provided new construction a viable pathway through CEQA and provides a pathway for development to meet the long-term goals of the City in a cost-effective manner.

The four top GHG reduction measures of the CAAP, however, are driven by a new over-arching strategy that leverages electricity procurement transitions by Sacramento Municipal Utility District (SMUD) (which currently offers 70 percent carbon-free electricity to the community and is anticipated to offer 100 percent carbon-free electricity by 2030). This new strategy aims to electrify transportation and the built environment to allow clean energy to replace fossil fuel-powered appliances and vehicles over the next 24 years. The County's strategies and actions are structured around four focus areas: buildings, transportation, waste, water and wastewater, and carbon sequestration. Together, Sacramento's CAAP measures have the potential to reduce GHG emissions well beyond the 2030 target.

4.3.3 City of Sacramento General Plan

The City of Sacramento 2035 General Plan was adopted in compliance with the requirements of California Government Code Section 65300 et seq in March 2015. The General Plan is the County's vision for future development. It identifies goals, policies, and objectives to govern the physical development of the County. State law requires each city and county to adopt a General Plan with a minimum of seven elements: Land Use, Circulation, Housing, Conservation, Open-Space, Noise, and Safety. The Draft 2040 General Plan was released on April 28, 2023 for an extended public review period that will run through August, 2023. The Draft 2040 General Plan contains several policies regarding air quality and climate change. The draft plan also contains the Climate Action & Adaptation Plan, as discussed above, which sets ambitious greenhouse gas emissions reduction targets and identifies key strategies to reach the City's goal of achieving carbon neutrality by 2045, and sets policy direction to respond to projected climate change impacts.

4.3.4 Metropolitan Transportation Plan/Sustainable Communities Strategy

The 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the Sacramento region pro-actively links land use, air quality, and transportation needs. The 2020 MTP/SCS lays out a transportation investment and land use strategy to support Sacramento with access to jobs and economic opportunity, transportation options, and affordable housing that works for all residents. The plan also lays out a path for improving air quality, preserving open space and natural resources, and helping California achieve its goal to reduce greenhouse gas emissions that contribute to climate change. Sacramento Area Council of Governments (SACOG) is responsible for updating and maintaining the MTP/SCS regularly.

5 THRESHOLDS OF SIGNIFICANCE

5.1 Air Quality

Based upon the environmental checklist presented in Appendix G of the State CEQA Guidelines, the project would have a significant impact on air quality if it would:

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

A discussion of applicable thresholds of significance and significance determination follow.

The SMAQMD CEQA Guide was prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the county of Sacramento (SMAQMD 2023). The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and includes recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. SMAQMD's air quality thresholds of significance are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health. Implementing the project would have a significant impact related to air quality such that human health would be adversely affected if it would (SMAQMD 2023):

- cause construction-generated criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended thresholds of 85 lb/day for NO_X, 80 lb/day or 14.6 tpy for PM_{10}, and 82 lb/day or 15 tpy for $PM_{2.5}$ after SMAQMD's Basic Construction Emission Control Practices have been implemented;
- result in a net increase in long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended thresholds of 65 lb/day for ROG and NO_X, 80 lb/day and 14.6 tpy for PM_{10}, and 82 lb/day or 15 tpy for $PM_{2.5}$;
- result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm; or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Projects that do not exceed the thresholds above would not cumulatively contribute to health effects in the Air Basin. If projects exceed the thresholds above, emissions would cumulatively contribute to the nonattainment status and would contribute to elevating health effects associated with these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants.

However, for projects that exceed the thresholds above, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the Air Basin would be affected by the health effects cited above.

The SMAQMD is the primary agencies responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the Air Basin and has developed Final Friant Ranch Guidance to address the issue raised in *Sierra Club v. County of Fresno (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978* (Friant Ranch). The SMAQMD Final Friant Ranch Guidance is based on modeling that estimates the incremental health effects of a project's emissions of criteria air pollutants and ozone precursors (SMAQMD 2023). Based on the magnitude of the project emissions, the Minor Project Health Effects Tool contained in the guidance was used to evaluate the project's incremental health effects. The Minor Project Health Effects tool was used to project the estimated health effects for a source emitting ROG, NO_X, and $PM_{2.5}$ at rates that match the lowest (i.e., most stringent) thresholds of significance for air districts in the area using local health data based on location. The most stringent thresholds of significance applied in this tool include 82 lb/day of $PM_{2.5}$ (derived from SMAQMD), 82 lb/day for PM_{10} (derived from the Placer County Air Pollution Control District), and 82 lb/day for ROG and NO_X (derived from the El Dorado County Air Quality Management District).

The Minor Projects Health Effects Screening Tool estimates the mean incidence of health outcomes such as mortality, hospital admissions, emergency room visits and heart attacks (acute myocardial infarction) in the SVAB that may result from emissions from a new project that emits 82 lb/day of NO_X, ROG, or PM. Projects with emissions lower than these thresholds of significance would have lower estimated health effects. Based on the impact determinations summarized below, the Project's associated adverse health outcomes were not discussed in detail for construction or operational emissions. Construction and operation-related TAC emissions were assessed qualitatively.

Impacts related to odors were also assessed qualitatively, based on proposed construction activities, equipment types and duration of use, overall construction schedule, proposed operational activities, and distance to nearby sensitive receptors.

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SVAB is in attainment of the California and National AAQS, and CO concentrations in the SVAB have steadily declined. Because CO concentrations have improved, the SMAQMD does not require a CO hotspot analysis as the project would not increase traffic volumes at affected intersections to more than 100 vehicles per hour, well under volumes of concern (CARB 2014).

5.1.1 Toxic Air Contaminants

Chapter 5 of the SMAQMD's CEQA Guide discussed the TAC thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. SMAQMD recommends that CEQA documents analyze potential impacts resulting from exposure of sensitive receptors to high doses of TACs and associated health risk for only certain circumstances/situations.

SMAQMD has not established a quantitative threshold of significance for construction-related TAC emissions and recommends that lead agencies address this issue on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and its proximity to off-site receptors. Information regarding the project's construction details related to TACs has been provided as part of this report. Furthermore, implementation of the SMAQMD's Basic Construction Emission Control Practices would result in the reduction of diesel PM exhaust emissions in addition to criteria pollutant emissions, particularly the measures to minimize engine idling time and maintain construction equipment in proper working condition and according to manufacturer's specifications. The Enhanced On-Site Exhaust Control Practices for off-road construction equipment, which requires NOx emissions be reduced by 10% will encourage the use of higher tier engines with lower particulate exhaust emissions. The SMAQMD basic and enhanced mitigation measures are discussed in detail in the CEQA Guide Chapter 3, Basic Construction Emission Control Practices (Best Management Practices).

Project-level emissions of TACs from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- result in an incremental increase in cancer risk (i.e., the risk of contracting cancer) greater than 10 in one million at any off-site receptor and/or a noncarcinogenic hazard index of 1.0 or greater;

5.2 Greenhouse Gases

Consistent with Appendix G of the State CEQA Guidelines, a project would have a significant GHG impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have an adverse effect on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

State CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions projects and consider several other factors that may be used in the determination of significance of project-related GHG emissions, including: the extent to which the project may increase or reduce GHG emissions; whether the project exceeds an applicable significant threshold; and the extent to which the project complies with the regulations or requirements adopted to implement a reduction or mitigation of GHG.

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look at thresholds developed by other public agencies, or suggested by other experts, such as the CAPCOA, as long as any threshold chosen is supported by substantial evidence (see State CEQA Guidelines Section 15064.7(c)). The State CEQA Guidelines also clarify that the events of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see State CEQA Guidelines Section 15130(f)). It is noted that the State CEQA Guidelines were amended in response to SB 97. In particular, the State CEQA Guidelines were amended to specify that compliance with the GHG emissions reduction plan renders a cumulative impact less than significant.

Per State CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions" (14 CCR Section 15064(h)(3)). Put another way, State CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies, and/or other regulatory strategies to reduce GHG emissions.

Per State CEQA Guidelines Section 15064.4(b), "in determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions." When determining the significance of GHG impacts, lead agencies should consider the project's impact as compared to the existing environmental setting, whether the project exceeds a threshold of significance, and compliance with relevant GHG-related plans (see, for example, State CEQA Guidelines Section 15064.4(b)). Regarding the latter criterion, lead agencies should consider "the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, for example, State CEQA Guidelines Section 15183.5(b)). Per State CEQA Guidelines Section 15064.4(b)(3), such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions.

In February 2021, the SMAQMD released GHG guidance as part of their CEQA Guide (SMAQMD). Generally, the SMAQMD agrees that GHG emissions are best analyzed and mitigated at the program level; however, since not all jurisdictions in Sacramento County have conducted program level GHG analyses, such as a GHG reduction plan or climate action plan, SMAQMD offers guidance for addressing the GHG emissions associated with individual development projects. SMAQMD recognizes that although there is no known level of emissions that determines if a single project will substantially impact the environment, a threshold must be set to trigger review and to assess the need for mitigation. The project's estimated GHG emissions will be compared to the SMAQMD's recommended thresholds of significance:

- Construction phase of all project types -1,100 metric tons of CO_2e per year.
- Stationary source operational emissions – 10,000 metric tons of CO_2e per year.
- Land development project operational emissions are reviewed in the context of consistency with CARB's Climate Change Scoping Plan

If a project's emissions exceed the thresholds of significance for construction or stationary source emissions, then the project emissions may have a cumulatively considerable contribution to a significant cumulative environmental impact, answering Appendix G's first GHG-related question on whether the project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. For projects that exceed the SMAQMD's thresholds of significance, lead agencies shall implement all feasible mitigation to reduce GHG emissions. The second GHG-related question in Appendix G asks if the project will conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. In order to answer this question, project emissions should be evaluated with respect to consistency with the following plans and policies, if applicable, that have been adopted to reduce GHG emissions:

- A jurisdiction's qualified climate action plan or GHG reduction plan.
- The Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).

As an additional significance criterion, consistency with the applicable plans and policies to reduce GHG emissions, including the emissions reduction policies, strategies, and measures discussed within CARB's Climate Change Scoping Plan, was additionally evaluated.

6 METHODOLOGY

This analysis focuses on the potential change in the air quality environment due to implementation of the project. Air pollution emissions would result from both construction and operation of the project. Specific methodologies used to evaluate these emissions are discussed below.

The analysis is based on project specifics and default values in the latest versions of CalEEMod. Accordingly, this analysis has been conducted with the most recent available tools prepared and accepted by the regulatory agencies.

6.1 Construction Emissions

The project's emissions will be evaluated based on significance thresholds and CEQA guidance established by SMAQMD, as discussed above. Daily emissions during construction are estimated by assuming a conservative construction schedule and applying the multiple source and fugitive dust emission factors derived from the SMAQMD-recommended CalEEMod version 2022.1.1.12. Details of the modeling assumptions and emission factors are provided in Appendix A. The calculations of the emissions generated during project construction activities reflect the types and quantities of construction equipment that would be used to complete the project.

6.1.1 Construction Assumptions

Construction emissions associated with the project, including emissions associated with the operation of off-road equipment, haul-truck trips, on-road worker vehicle trips, vehicle travel on paved and unpaved surfaces, and fugitive dust from material handling activities, were calculated using CalEEMod version 2022.1.1.12 (CAPCOA 2023). 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 and GHG emissions associated with both construction and operation of a variety of land use projects. The model uses widely accepted federal and state models for emission estimates and default data from sources such as EPA AP-42 emission factors, CARB vehicle emission models, and studies from California agencies such as CEC. The model quantifies direct emissions from construction and operations, as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The model was developed in collaboration with the air districts in California. Default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions.

Emissions modeling included emissions generated during the project have been grouped into seven phases in CalEEMod based on the types of equipment and workload: 1) demolition (including demolition of paved area, tree removal, clearing of existing fences/bleachers/dugouts, etc. assuming 1,500 tons of material hauled away); 2) site preparation (including clearing and grubbing and hauling away of any remaining material); 3) grading and erosion control; 4) building construction 1 (including site work, irrigation, landscaping); 5) building construction 2 (including plant establishment); 6) paving (paving of parking lot and courts); and 7) finishing (including finishing activities and architectural coatings parking lot and courts). The project is within a 362-acre park, however, the total acres involved for the Renfree

Field Renovations Project totals approximately 8.33 acres. Three CalEEMod land uses were utilized ‘Recreational – City Park’ for the 7.25 acres (which includes the fields, paths, and area west of Bridge Road), ‘Parking – Parking lot’ for the 77 parking spots, and ‘Parking – Other Asphalt Surfaces’ for the approximately 0.5 acres of paved courts. This analysis includes quantification of construction and operation off-road equipment, fugitive dust, and on-road mobile sources, as well as the operational emissions for Renfree Field.

Modeling input data were based on this anticipated construction schedule and phasing. Construction equipment and usage required for each phase were obtained using CalEEMod defaults for the land use types which make up the project site, information provided by the City, and default parameters contained in the model for the project site (Sacramento County) and land uses. The construction duration is assumed to be approximately 8-10 months, from March 2024 through to the end of December 2024. Project construction would consist of different activities undertaken in phases, through to the operation of the project. Typical construction equipment would be used during all phases of project construction and would be stored within the staging area, potentially including dozers, backhoes, graders, and excavators. Table 6 shows the project’s anticipated construction schedule, presents an estimate of the maximum number of pieces of equipment for each construction phase, and conservatively assumes equipment would be operating 8 hours per day, 5 days per week for the construction phase duration. The construction emissions were mitigated in the CalEEMod model to comply with any SMAQMD BMPs (SMAQMD 2023).

Table 6. Construction Anticipated Schedule, Trips, and Equipment

Phase (Duration)	Equipment Used: Type	Number	Hours/Day	Daily Vehicle Trips
1. Demolition 3/1/2024–3/21/2024 (15 working days)	Rubber Tired Dozers Concrete/Industrial Saws Excavators	2 1 3	8 8 8	20 one-way worker trips 2 one-way vendor trips 20 one-way onsite haul truck trips 1 mile of onsite truck travel
2. Site Preparation 3/1/2024–3/21/2024 (15 working days)	Rubber Tired Dozers Tractors/Loaders/Backhoes	3 4	8 8	20 one-way worker trips 2 one-way vendor trips 4 one-way onsite haul truck trips 1 mile of onsite truck travel
3. Grading 3/22/2024–4/11/2024 (15 working days)	Tractors/Loaders/Backhoes Excavators Graders Rubber Tired Dozers	3 1 1 1	8 8 8 8	20 one-way worker trips 2 one-way vendor trips 0 one-way onsite haul truck trips 1 mile of onsite truck travel
4. Building Construction 1 4/12/2024–10/3/2024 (125 working days)	Cranes Forklifts Generator Sets Tractors/Loaders/Backhoes Welders	1 3 1 3 1	7 8 8 7 8	20 one-way worker trips 2 one-way vendor trips 4 one-way onsite haul truck trips 1 mile of onsite truck travel
5. Building Construction 2 10/4/2024–12/26/2024 (60 working days)	Tractors/Loaders/Backhoes	3	7	20 one-way worker trips 2 one-way vendor trips 2 one-way onsite haul truck trips 1 mile of onsite truck travel
6. Paving 5/1/2024–6/11/2024 (30 working days)	Pavers Paving Equipment Rollers	2 2 2	8 8 8	20 one-way worker trips 2 one-way vendor trips 0 one-way onsite haul truck trips 1 miles of onsite truck travel
7. Finalization 12/1/2024–12/31/2024 (22 working days)	Air Compressors	1	6	0 one-way worker trips 0 one-way vendor trips 0 one-way onsite haul truck trips 1 miles of onsite truck travel

Notes: For the parameters that are not provided in the table (e.g., equipment horsepower and load factor, on-road trip lengths), CalEEMod defaults were used.

6.2 Operational Emissions

Once construction is completed the project would be operational sports courts, ball fields and soccer field with associate parking area. Criteria pollutant and GHG emissions from the operation of the project were estimated using CalEEMod Version 2022.1.1.12. Year 2025 was assumed as the first full year of operations after completion of construction. The operational emissions were calculated based on

CalEEMod defaults associated with the project's land use types, removing any natural gas processes. Analysis of the project's likely impact on regional air quality during project operation takes into consideration three types of sources: 1) area, 2) energy, and 3) mobile.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating, water heating, and stoves are not calculated as no buildings are proposed as part of the project. The project will not include any natural gas.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2023). For parking lot land uses, CalEEMod estimates VOC emissions associated with use of parking surface degreasers based on a square footage of parking surface area and pounds of VOC per square foot per day.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings, such as in paints and primers using during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of residential and nonresidential surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The VOC emission factor is based on the CalEEMod default VOC content of the surface coatings. The model default reapplication rate of 10% of area per year is assumed. Architectural coating for the parking surface area was also estimated with CalEEMod defaults.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers. The emissions associated with landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For Sacramento County, the average annual "summer" days are estimated to 250 days; and it is assumed that landscaping equipment would operate 250 days per year in CalEEMod. Emissions associated with potential landscape maintenance equipment were included and no emission reduction features related to electric landscape equipment were assumed, to conservatively capture potential project operational emission sources.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building and parking lot electricity, and for this project the electricity from the field lighting was also included. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off-site.

Mobile Sources

The project would generate criteria pollutant emissions from mobile sources (vehicular traffic) as a result of project operations. Emissions from mobile sources during operation of the project were estimated using CalEEMod default trip rates, trip lengths, fleet mix, and emissions factors for each vehicle.

6.3 Greenhouse Gas

This analysis quantifies the project's total annual GHG emissions from construction, taking into account any GHG emission reduction measures that would be incorporated into the project's design. This analysis evaluates the significance of the project's GHG emission by assessing the project's consistency with SMAQMD CEQA Guide (SMAQMD 2023).

6.4 Toxic Air Contaminants Impacts (Construction and Operations)

SMAQMD recommends that CEQA documents analyze potential impacts resulting from exposure of sensitive receptors to high doses of TACs and associated health risk for only certain circumstances/situations. The project does not produce high doses of any TACs during construction or operation. Potential TAC impacts were evaluated in this analysis by conducting a qualitative analysis consistent with the CARB Handbook (2005) and SMAQMD guidance. The TAC that is the focus of this analysis is diesel PM because it is known that diesel PM would be emitted during project construction and operation. Construction-related activities that would result in temporary, intermittent emissions of diesel PM would be from the exhaust of off-road equipment and on-road heavy-duty trucks. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive diesel PM emissions. The project is consistent with TAC-related rules and regulations and the CalEEMod modeling shows the low exhaust PM during construction and operation (Appendix A). Furthermore, implementation of the SMAQMD's BMPs would result in the reduction of diesel PM exhaust emissions in addition to criteria pollutant emissions, particularly the measures to minimize engine idling time and maintain construction equipment in proper working condition and according to manufacturer's specifications.

7 IMPACT ANALYSIS

Impact AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?
Less Than Significant Impact. A project is conforming with applicable adopted plans if it complies with the applicable SMAQMD rules and regulations and emission control strategies in the applicable air quality attainment plans. The project would comply with the applicable rules and regulations, including the use of BMPs.

Consistency with air quality plans is typically conducted based on a comparison of project-generated growth in employment, population, and vehicle miles traveled within the region, which is used for development of the emissions inventories contained in the air quality plans. While the project would contribute to energy supply, which is one factor of population growth, the project would not significantly increase employment, population, or growth within the region. The development of the project would renovate an existing field and would continue to fulfill this need in the community.

Furthermore, the thresholds of significance, adopted by the SMAQMD, determine compliance with the goals of attainment plans in the region. As such, emissions below the SMAQMD regional mass daily emissions thresholds would not conflict with or obstruct implementation of the applicable air quality plans. The project implementation would generate emissions of criteria air pollutants during construction and operation. The emissions from project construction (Table 7 and Table 8) and operation (Table 9) are below the thresholds of significance; therefore, the project does not conflict with implementation of the SMAQMD applicable air quality plans (Sacramento SIPs, CAAP, the General Plan and SMAQMD CEQA Guide). The detailed assumptions and calculations, as well as CalEEMod outputs are provided in Appendix A of this report.

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

Less Than Significant Impact with Mitigation. The SMAQMD's thresholds of significance represent the allowable emissions a project can generate without generating a cumulatively considerable contribution to regional air quality impacts. Therefore, a project that would not exceed the SMAQMD thresholds of significance on a project level also would not be considered to result in a cumulatively considerable contribution to these regional air quality impacts. The region is non-attainment for federal and state 8-hour ozone standards, and federal 24-hour $PM_{2.5}$ standards. Impacts related to construction and operation of the proposed project are addressed separately below.

Construction

The project implementation would generate emissions of criteria air pollutants during construction. The estimated unmitigated emissions from construction of the project are summarized in Table 7. The detailed assumptions and calculations, as well as CalEEMod outputs are provided in Appendix A of this report.

Table 7. Unmitigated Construction Emissions Summary

	Unmitigated Construction Emissions Summary					
Construction Year	**ROG**	**NOx**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**
Pollutant Emission (pounds per day)						
2024 Peak Daily Emission	6.48	64.90	57.76	28.04	13.4	0.10
SMAQMD Significance Thresholds	*N/A*	*85*	*N/A*	*80*	*82*	*N/A*
Threshold Exceeded?	*N/A*	*No*	*N/A*	*No*	*No*	*N/A*
Pollutant Emission (tons per year)						
2024 Max Annual	0.18	1.62	1.83	0.49	0.19	0.003
SMAQMD Significance Thresholds	*N/A*	*N/A*	*N/A*	*14.6*	*15*	*N/A*
Threshold Exceeded?	*N/A*	*N/A*	*N/A*	*No*	*No*	*N/A*

Source: Emissions were quantified using CalEEMod version 2022.1.1.12 (CAPCOA 2023). Max Winter reported for lb/day emissions.

NA = Not applicable, no threshold

Model results (summer, winter, and annual) and assumptions are provided in Appendix A.

As Table 7 shows, estimated unmitigated construction emissions for all pollutants are below SMAQMD significance thresholds. The combined construction emissions from all components of the proposed project are below the recommended SMAQMD thresholds of significance. Therefore, project construction would have a less-than-significant impact. However, BMPs have been included to further reduce localized impacts. The estimated mitigated emissions from construction of the project are summarized in Table 8.

Table 8. Mitigated Construction Emissions Summary

Construction Year	Mitigated Construction Emissions Summary					
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$	SO_2
Pollutant Emission (pounds per day)						
2024 Peak Daily Emission	6.48	64.90	57.76	14.09	7.00	0.10
SMAQMD Significance Thresholds	*N/A*	*85*	*N/A*	*80*	*82*	*N/A*
Threshold Exceeded?	*N/A*	*No*	*N/A*	*No*	*No*	*N/A*
Pollutant Emission (tons per year)						
2024 Max Annual	0.18	1.62	1.83	0.29	0.12	0.003
SMAQMD Significance Thresholds	*N/A*	*N/A*	*N/A*	*14.6*	*15*	*N/A*
Threshold Exceeded?	*N/A*	*N/A*	*N/A*	*No*	*No*	*N/A*

Source: Emissions were quantified using CalEEMod version 2022.1.1.12 (CAPCOA 2023). Max Winter reported for lb/day emissions.

NA = Not applicable, no threshold

Model results (summer, winter, and annual) and assumptions are provided in Appendix A.

As presented above, the project would not violate any air quality significance thresholds or contribute substantially to an existing or projected air quality violation. The impact is less than significant, and no mitigation is required. However, for all proposed projects, the SMAQMD recommends the implementation of BMPs, whether or not construction-related emissions exceed applicable thresholds of significance. As such, Mitigation Measures AQ-1 and AQ-2 have been added to comply with SMAQMD BMPs.

After implementation of these recommended measures, the project would have a less than- significant impact with respect to community risk caused by construction activities.

Operations

Project operations would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment, water, waste, and energy sources. The estimated emissions from operation of the project are summarized in Table 9. Complete details of the emissions calculations are provided in Appendix A.

Table 9. Unmitigated Operational Emissions Summary

Operation Year 2025	Unmitigated Operational Emissions Summary					
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$	SO_2
Pollutant Emission (pounds per day)						
Mobile	0.16	0.16	1.57	0.28	0.07	0.005
Area	0.01	0	0	0	0	0
Energy	0	0	0	0	0	0
Total	**0.16**	**0.16**	**1.57**	**0.28**	**0.07**	**0.005**
SMAQMD Significance Thresholds	*N/A*	*65*	*N/A*	*80*	*82*	*N/A*

Threshold Exceeded?	*N/A*	*No*	*N/A*	*No*	*No*	*N/A*
Pollutant Emission (tons per year)						
Mobile	0.02	0.02	0.14	0.03	0.01	0.0003
Area	0.002	0	0	0	0	0
Energy	0	0	0	0	0	0
Total	**0.02**	**0.02**	**0.14**	**0.03**	**0.01**	**0.0003**
SMAQMD Significance Thresholds	*N/A*	*N/A*	*N/A*	*14.6*	*15*	*N/A*
Threshold Exceeded?	*N/A*	*N/A*	*N/A*	*No*	*No*	*N/A*

Source: Emissions were quantified using CalEEMod version 2022.1.1.12 (CAPCOA 2023). Max Summer reported for lb/day emissions

NA = Not applicable, no threshold

Model results (summer, winter, and annual) and assumptions are provided in Appendix A.

As Table 9 shows, estimated unmitigated operational emissions for all pollutants are below SMAQMD significance thresholds, however applicable SMAQMD BMPs would be applied. Also, project operations would not affect traffic volumes at any affected intersection. Therefore, the proposed project would not exceed the CO screening criteria. Therefore, based on the above criteria, the proposed project would have a less-than-significant impact related to CO hotspots.

The combined construction emissions and combined operational emissions from all components of the proposed project are below the recommended SMAQMD thresholds of significance. Therefore, the project would not be anticipated to exceed any significance threshold and would have a less than significant contribution to cumulative impacts.

Impact AQ-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact with Mitigation. While criteria pollutants (such as particulate matter (PM_{10} and $PM_{2.5}$) are a concern at the regional level, community risk impacts from TACs exposure to nearby sensitive receptors are also a localized concern. While the discussion under Impact AQ-3 above addressed PM at the regional level, this impact addresses PM at the localized level. Impacts related to increased community risk can occur either by introducing new sensitive receptors, such as residences, in proximity to existing sources of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity.

The TAC that is the focus of this analysis is diesel PM because it is known that diesel PM would be emitted during project construction and operation. Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are primarily associated with industrial operations and the project would not include any industrial sources of other TACs.

Construction-related activities that would result in temporary, intermittent emissions of diesel PM would be from the exhaust of off-road equipment and on-road heavy-duty trucks. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive diesel PM emissions.

Based on the construction-related emissions modeling conducted (see Appendix A), maximum daily emissions of exhaust PM_{10} (used as a surrogate for diesel PM) would be less than 3 pounds during peak construction. A portion of these emissions would be related to haul trucks traveling and to and from the

Project site. Less than 3 pounds per day is below the SMAQMD-recommended threshold of 80 lb/day with the application of BMPs.

In addition, studies show that diesel PM is highly dispersive and that concentrations of diesel PM decline with distance from the source (e.g., 500 feet from a freeway, the concentration of diesel PM decreases by 70 percent) (Roorda-Knape et al. 1999; Zhu et al. 2002, cited in CARB 2005:9). Additionally, the closest receptors to the Project site are located approximately 230 feet north-northwest of the project site along Park Boulevard, or the Sunset Gardens apartment complex, which is approximately 300 feet southeast of the project site across Auburn Boulevard. Construction would not be limited only to the southern or northern portion of the project site but would rather occur throughout the project site in phases.

Construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0 for the following reasons. The low exposure level reflects the 1) relatively low mass of diesel PM emissions that would be generated by construction activity on the Project site (i.e., 3 lb/day of exhaust PM_{10}), 2) the relatively short duration of diesel PM-emitting construction activity at the Project site (8-10 months), and 3) the highly dispersive properties of diesel PM.

Operation-related TAC emissions would be negligible, as a majority of potential visitors to the project would drive gasoline powered vehicles. Also, any on-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive diesel PM emissions. No other TAC emission sources will occur during operations.

Therefore, construction and operation-generated emissions of TACs would be less than significant.

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

Less Than Significant Impact. The project would not be a source of any odors during operations. During construction, a limited number of diesel engines would be operated on the project site for limited durations. Diesel exhaust and volatile organic compounds (VOCs) from these diesel engines would be emitted during construction of the proposed project, which are objectionable to some; however, the short duration of construction activities is expected to last approximately 8-10 months, emissions would disperse rapidly from the project site, and diesel exhaust odors would be consistent with existing vehicle odors in the area. Considering this information, construction and operation of the proposed project would not create other emissions or odors adversely affecting a substantial number of people; impacts would be less than significant.

Impact GHG-1 Would the project generate GHG emissions, either directly or indirectly, that may have an adverse effect on the environment?

Less Than Significant Impact. Construction of the project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road vendor trucks, and worker vehicles. The SMAQMD CEQA Guide provide a construction GHG significance threshold. Project construction emissions were calculated and compared to the SMAQMD significance threshold. Construction emissions were also amortized over a 30-year project lifetime. CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described. Construction of the project is anticipated to last approximately eight to ten months. On-site sources of GHG emissions include off-road equipment and off-site sources including haul trucks, vendor trucks and worker vehicles. Table 10 presents construction emissions for the project from on-site and off-site emission sources.

Table 10. Estimated Annual Construction Greenhouse Gas Emissions

Construction Years	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2024	320.3	0.015	0.01	323.6
		Amortized construction emissions		***10.8***
SMAQMD GHG Threshold	N/A	N/A	N/A	1,100

Source: Appendix A.

As shown in Table 10, the estimated total GHG emissions during construction would be approximately 323.6 $MTCO_2e$ over the construction period, below the SMAQMD threshold. Estimated project-generated construction emissions amortized over 30 years would be approximately 10.8 $MTCO_2e$ per year. As with project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the project would only occur when construction is active, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

Operation of the project would generate GHG emissions through motor vehicle trips to and from the project site, landscape maintenance equipment operation, energy use, solid waste disposal, and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in Section 6.2.

The estimated operational project-generated GHG emissions from area sources, energy usage, motor vehicles, off-road and stationary sources, solid waste generation, and water usage and wastewater generation are shown in Table 11.

Table 11. Estimated Annual Operational Greenhouse Gas Emissions

Construction Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	0	0	0	0
Energy	48.6	0.002	0.0002	48.7
Mobile	31.3	0.001	0.001	31.8
Water	1.5	0.01	0	1.5
Waste	0.05	0.005	0	0.2
Refrigeration	0	0	0	0
Total	81.4	0.01	0.002	82.2
		Amortized construction emissions		10.8
	Total operational + amortized construction GHGs			***93.0***

Source: Appendix A.
Note: These emissions reflect operational year 2025.

As shown in Table 11, estimated annual project-generated GHG emissions would be approximately 81.5 MT CO_2e per year as a result of project operations only. After summing the amortized project construction emissions, total GHGs generated by the project would be approximately 92.3 MT CO_2e per year. In summary, Impact GHG-1 would be less than significant.

Impact GHG-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Less Than Significant Impact. The City of Sacramento draft Climate Action & Adaptation Plan (CAAP), released on April 28, 2023, provides a pathway for the City of Sacramento to reduce GHG emissions consistent with state goals. In particular, the CAAP Update was developed to exceed the requirements of Senate Bill (SB) 32, which calls for a reduction in statewide GHG emissions 40% below 1990 levels by 2030. The CAAP also demonstrates the City's plan for substantial progress towards consistency with the State of California's statewide policy goals for GHG emission reductions, as enacted by AB1279 and the California Air Resource Board's 2022 Scoping Plan for Achieving Carbon Neutrality which sets a path to achieve carbon neutrality by 2045 with at least 85% reduction in GHG emissions from 1990 levels.

In addition, this CAAP will fulfill the requirements of the CEQA Guidelines § 15183.5(b) to be a "qualified" GHG reduction plan. The CAAP is also consistent with the City's General Plan Update, using the same population, housing, and VMT growth projections. The Draft 2040 General Plan, also released April 2023, contains several policies regarding air quality and climate change. The City of Sacramento 2035 General Plan was adopted in compliance with the requirements of California Government Code Section 65300 et seq in March 2015. The General Plan is the County's vision for future development. It identifies goals, policies, and objectives to govern the physical development of the County. State law requires each city and county to adopt a General Plan with a minimum of seven elements: Land Use, Circulation, Housing, Conservation, Open-Space, Noise, and Safety. The 2020 MTP/SCS lays out a transportation investment and land use strategy to support Sacramento with access to jobs and economic opportunity, transportation options, and affordable housing that works for all residents. The plan also lays out a path for improving air quality, preserving open space and natural resources, and helping California achieve its goal to reduce greenhouse gas emissions that contribute to climate change.

The project is a small renovation project that would not conflict with the policies, regulations, or guidelines in the General Plan, CAAP, or any other applicable plans and/or regulations adopted for the purposes of reducing GHG emissions. Furthermore, GHG emissions from the project, as shown Appendix A, would not generate substantial GHG emissions during construction or operation. Therefore, impacts would be less than significant.

7.1 Cumulative Impacts

7.1.1 Air Quality

The cumulative setting for air quality includes the Air Basin, which is designated as a nonattainment area for federal and state standards of 8-hour ozone, and federal standards of $PM_{2.5}$; and unclassified or attainment for all other pollutants. Cumulative growth in population and vehicle use could inhibit efforts to improve regional air quality and attain the ambient air quality standards. The SMAQMD CEQA Guide does not include separate significance thresholds for cumulative construction and operational emissions. As described in threshold discussion, above, the project would also be consistent with the appropriate SMAQMD BMP measures, which are provided to reduce air quality emissions for the Sacramento region. Additionally, the threshold discussion, above, addresses cumulative impacts and demonstrates that the project would not exceed the applicable SMAQMD significance thresholds for construction or operations. The SMAQMD CEQA Guide notes that the nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size by itself to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Consistency with the CAAP, General Plan and SMAQMD CEQA Guide information would ensure that the project would not cumulatively contribute to air quality impacts in the Basin; therefore, impacts would be less than significant.

7.1.2 Greenhouse Gas Emissions

The analysis of a project's GHG emissions is inherently a cumulative impacts analysis because climate change is a global problem and the emissions from any single project alone would be negligible. Accordingly, the analysis above considers the potential for the project to contribute to the cumulative impact of a global climate change. Table 10 and Table 11 show the estimated annual project-generated GHG emissions as a result of project construction and operation. Given that the project would generate construction and operation GHG emissions that are below SMAQMD thresholds, that would not conflict with applicable reduction plans and policies and given that GHG emission impacts are cumulative in nature, the project's incremental contribution to cumulatively significant GHG emissions would be less than significant.

7.2 Mitigation Measures

AQ-1: Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust. The implementing agency will require, as a standard or specification of their contract, the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust. Although the following measures are outlined in the SMAQMD's CEQA guidelines, they are required for the entirety of the construction area. The implementing agency will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

- Water all exposed surfaces two times daily. Exposed surfaces include (but are not limited to) soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- All roadway, driveway, sidewalk, and parking lot paving should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

AQ- 2: In accordance with the SMAQMD's CEQA Guidance, all Projects undergoing environmental review should implement the Tier 1 BMPs – even if they do not exceed the operational screening table in Chapter 4 of the CEQA guide.

- BMP 1 – Projects shall be designed and constructed without natural gas infrastructure. For the area of the building with cooking equipment, the building official shall grant the exemption only for fuel gas piping, fixtures, or infrastructure necessary for cooking equipment within the designated food service area.

If Project greenhouse gas emissions are over the 1,100 metric tons CO_2e/year after the Project applied Tier 1 BMPs, Tier 2 BMPs should be implemented.

- BMP 2 – Projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle nearby.

8 REFERENCES & LITERATURE CITED

California Air Pollution Control Officers Association (CAPCOA). 2023. California Emission Estimator Model (CalEEMod) and User Guide. Version 2022.1.1.12. Available at: http://www.caleemod.com/.

California Air Resources Board (CARB). 1998. Report to the Air Resources Board on the Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, Part A Exposure Assessment (as approved by the Scientific Review Panel).

———. 2000a. A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/toxics/asbestos/ofr_2000-019.pdf.

———. 2000b. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf.

———. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available at: https://sfmohcd.org/sites/default/files/20%20-%20CARB%2C%20Air%20Quality%20and%20Land%20Use%20Handbook%202005.pdf.

———. 2011. CARB Toxic Air Contaminant Identification List. Available at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

———. 2014. First Update to the Climate Change Scoping Plan. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

———. 2016. Ambient Air Quality Standards Chart. Available at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

———. 2017a. 2017 Scoping Plan Documents. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents,

———. 2017b. 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. Available at: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf

———. 2018. Updated Final Staff Report: Proposed Update to the SB 375 Greenhouse Gas Emissions Reduction Targets.

———. 2021. Current California GHG Emission Inventory Data. 2000-2019 GHG Inventory (2021 Edition). Available at: https://ww2.arb.ca.gov/ghg-inventory-data.

———. 2022a. GHG 1990 Emissions Level & 2020 Limit. Available at: https://ww2.arb.ca.gov/ghg-2020-limit.

———. 2022c. 2022 Scoping Plan Update and Appendices. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents#:~:text=The%202022%20Scoping%20Plan%20Update%20focuses%20on%20outcomes,energy%20security%2C%20environmental%20justice%2C%20and%20public%20health%20priorities..

———. 2023. Air Quality Data Statistics; Top Four Summary for Monitored data at Livermore Station. Available online: https://www.arb.ca.gov/adam/

California Energy Commission (CEC), Energy Research and Development Division. 2021. California Building Decarbonization Assessment. Available at: https://www.energy.ca.gov/publications/2021/california-building-decarbonization-assessment.

City of Sacramento. 2023. City of Sacramento Climate Action and Adaptation Plan Public Review Draft. Available at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Major-Projects/generalPlan/Climate-Action-and-Adaptation-Plan---April-28--2023.pdf?la=en

County of San Mateo. 2013. County of San Mateo General Plan. Available at: https://www.smcgov.org/planning/general-plan-policies.

County of San Mateo. 2022. County of San Mateo Community Climate Action Plan. Available at: https://www.smcgov.org/media/73456/download?inline=.

Friedlingstein, P., M.W. Jones, M. O'Sullivan, R.M. Andrew, D.C.E. Bakker, J. Hauck, C. Le Quéré, et al. 2022. Global Carbon Budget 2021. Available at: essd-14-1917-2022.pdf.

Governor's Office of Planning and Research (OPR). 2008. Technical Advisory. CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review. Available at: https://opr.ca.gov/docs/june08-ceqa.pdf.

———. 2018. Discussion Draft: CEQA and Climate Change Advisory. Available at: https://www.opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Adivsory.pdf.

Intergovernmental Panel on Climate Change (IPCC). 2007. IPCC Fourth Assessment Report: Climate Change 2007 (AR4): The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Table 2.14. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf.

———. 2013. IPCC Fifth Assessment Report: Climate Change 2013 (AR5): The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments 2015. Available at: http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf.

———. 2021. CalEnviroScreen 4.0. Available at: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40.

Sacramento Metro Air Quality Management District. 2023. CEQA Guidance & Tools. Available at: https://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools

———.

U.S. Environmental Protection Agency (EPA). 2022a. Criteria Air Pollutants. Available at: https://www.epa.gov/criteria-air-pollutants.

———. 2022b. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2020. Available at: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2020.

———. 2023a. Green Book. California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Available at: https://www3.epa.gov/airquality/greenbook/anayo_ca.html.

———. 2023b. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2021. Available at: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2021.

Van Gosen, B.S., and J.P. Clinkenbeard. 2011. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California, 2011. Open-File Report 2011-1188. Denver, Colorado: U.S. Geological Survey and Sacramento: California Geological Survey. Available at: https://pubs.usgs.gov/of/2011/1188/

Western Regional Climate Center. 2002. Prevailing Wind Direction. Available: https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg.

———. 2016. Sacramento Executive AP, California (047630): Period of Record Monthly Climate Summary. Available: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7630.

APPENDIX A

2023 CalEEMod Results

Air Pollutant & GHG Emission Calculations

Renfree Field Renovation Project v2 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Renfree Field Renovation Project v2
Construction Start Date	3/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	39.2
Location	38.64059964183758, -121.3770132403099
County	Sacramento
City	Sacramento
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	662
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.14

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

City Park	7.25	Acre	7.25	0.00	0.00	309,786	—	Field, new path, area near courts and area west of bridge
Parking Lot	77.0	Space	0.75	0.00	5,000	0.00	—	parking lot with landscaping
Other Asphalt Surfaces	0.50	Acre	0.50	0.00	0.00	0.00	—	basket ball and pickeball courts

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-B	Water Active Demolition Sites
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.69	2.35	20.0	25.7	0.04	0.89	8.58	9.42	0.82	3.60	4.37	—	4,722	4,722	0.21	0.11	2.53	4,763
Mit.	2.69	2.35	20.0	25.7	0.04	0.89	3.69	4.52	0.82	1.45	2.23	—	4,722	4,722	0.21	0.11	2.53	4,763
% Reduced	—	—	—	—	—	—	57%	52%	—	60%	49%	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.87	6.48	64.9	57.8	0.10	2.69	25.3	28.0	2.48	10.9	13.4	—	11,001	11,001	0.54	0.39	0.15	11,132
Mit.	7.87	6.48	64.9	57.8	0.10	2.69	11.4	14.1	2.48	4.51	6.99	—	11,001	11,001	0.54	0.39	0.15	11,132
% Reduced	—	—	—	—	—	—	55%	50%	—	59%	48%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.14	1.01	8.85	10.0	0.02	0.38	2.31	2.68	0.35	0.71	1.05	—	1,935	1,935	0.09	0.06	0.48	1,954
Mit.	1.14	1.01	8.85	10.0	0.02	0.38	1.19	1.57	0.35	0.32	0.67	—	1,935	1,935	0.09	0.06	0.48	1,954
% Reduced	—	—	—	—	—	—	48%	42%	—	54%	37%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.18	1.62	1.83	< 0.005	0.07	0.42	0.49	0.06	0.13	0.19	—	320	320	0.01	0.01	0.08	324
Mit.	0.21	0.18	1.62	1.83	< 0.005	0.07	0.22	0.29	0.06	0.06	0.12	—	320	320	0.01	0.01	0.08	324
% Reduced	—	—	—	—	—	—	48%	42%	—	54%	37%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.69	2.35	20.0	25.7	0.04	0.89	8.58	9.42	0.82	3.60	4.37	—	4,722	4,722	0.21	0.11	2.53	4,763
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	7.87	6.48	64.9	57.8	0.10	2.69	25.3	28.0	2.48	10.9	13.4	—	11,001	11,001	0.54	0.39	0.15	11,132

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.14	1.01	8.85	10.0	0.02	0.38	2.31	2.68	0.35	0.71	1.05	—	1,935	1,935	0.09	0.06	0.48	1,954
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.21	0.18	1.62	1.83	< 0.005	0.07	0.42	0.49	0.06	0.13	0.19	—	320	320	0.01	0.01	0.08	324

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.69	2.35	20.0	25.7	0.04	0.89	3.69	4.52	0.82	1.45	2.23	—	4,722	4,722	0.21	0.11	2.53	4,763
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	7.87	6.48	64.9	57.8	0.10	2.69	11.4	14.1	2.48	4.51	6.99	—	11,001	11,001	0.54	0.39	0.15	11,132
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.14	1.01	8.85	10.0	0.02	0.38	1.19	1.57	0.35	0.32	0.67	—	1,935	1,935	0.09	0.06	0.48	1,954
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.21	0.18	1.62	1.83	< 0.005	0.07	0.22	0.29	0.06	0.06	0.12	—	320	320	0.01	0.01	0.08	324

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	0.17	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	0.34	648	649	0.06	0.02	1.30	656

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.16	0.15	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	0.34	618	618	0.06	0.02	0.03	625
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.09	0.10	0.76	< 0.005	< 0.005	0.16	0.17	< 0.005	0.04	0.04	0.34	491	492	0.05	0.01	0.33	496
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	0.06	81.4	81.4	0.01	< 0.005	0.05	82.2

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.16	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	346	346	0.01	0.01	1.30	352
Area	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	293	293	0.01	< 0.005	—	294
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Waste	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.17	0.17	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	0.34	648	649	0.06	0.02	1.30	656
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.14	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	316	316	0.02	0.02	0.03	321
Area	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	293	293	0.01	< 0.005	—	294
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Waste	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.16	0.15	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	0.34	618	618	0.06	0.02	0.03	625
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.09	0.08	0.10	0.76	< 0.005	< 0.005	0.16	0.17	< 0.005	0.04	0.04	—	189	189	0.01	0.01	0.33	192
Area	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	293	293	0.01	< 0.005	—	294
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Waste	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.09	0.09	0.10	0.76	< 0.005	< 0.005	0.16	0.17	< 0.005	0.04	0.04	0.34	491	492	0.05	0.01	0.33	496
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	31.3	31.3	< 0.005	< 0.005	0.05	31.8
Area	0.00	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	48.6	48.6	< 0.005	< 0.005	—	48.7
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	1.47	1.47	< 0.005	< 0.005	—	1.47
Waste	—	—	—	—	—	—	—	—	—	—	—	0.06	0.00	0.06	0.01	0.00	—	0.19
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	0.06	81.4	81.4	0.01	< 0.005	0.05	82.2

2.6. Operations Emissions by Sector, Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.16	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	346	346	0.01	0.01	1.30	352
Area	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	293	293	0.01	< 0.005	—	294
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Waste	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.17	0.17	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	0.34	648	649	0.06	0.02	1.30	656
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.14	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	316	316	0.02	0.02	0.03	321
Area	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	293	293	0.01	< 0.005	—	294
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Waste	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.16	0.15	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	0.34	618	618	0.06	0.02	0.03	625
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.09	0.08	0.10	0.76	< 0.005	< 0.005	0.16	0.17	< 0.005	0.04	0.04	—	189	189	0.01	0.01	0.33	192
Area	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	293	293	0.01	< 0.005	—	294
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Waste	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.09	0.09	0.10	0.76	< 0.005	< 0.005	0.16	0.17	< 0.005	0.04	0.04	0.34	491	492	0.05	0.01	0.33	496

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	31.3	31.3	< 0.005	< 0.005	0.05	31.8
Area	0.00	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	48.6	48.6	< 0.005	< 0.005	—	48.7
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	1.47	1.47	< 0.005	< 0.005	—	1.47
Waste	—	—	—	—	—	—	—	—	—	—	—	0.06	0.00	0.06	0.01	0.00	—	0.19
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	0.06	81.4	81.4	0.01	< 0.005	0.05	82.2

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	2.23	2.23	—	0.34	0.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.31	1.31	< 0.005	0.13	0.13	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.11	1.02	0.89	< 0.005	0.04	—	0.04	0.04	—	0.04	—	141	141	0.01	< 0.005	—	141
Demolition	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.0	48.0	< 0.005	0.01	< 0.005	50.2
Hauling	0.19	0.05	3.04	1.06	0.02	0.03	0.38	0.41	0.03	0.10	0.13	—	1,513	1,513	0.14	0.24	0.08	1,589
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.54	7.54	< 0.005	< 0.005	0.01	7.65
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.07
Hauling	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.2	62.2	0.01	0.01	0.06	65.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.8

3.2. Demolition (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	1.43	1.43	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.02	0.89	< 0.005	0.04	—	0.04	0.04	—	0.04	—	141	141	0.01	< 0.005	—	141
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.0	48.0	< 0.005	0.01	< 0.005	50.2
Hauling	0.19	0.05	3.04	1.06	0.02	0.03	0.38	0.41	0.03	0.10	0.13	—	1,513	1,513	0.14	0.24	0.08	1,589
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.54	7.54	< 0.005	< 0.005	0.01	7.65
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.07
Hauling	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.2	62.2	0.01	0.01	0.06	65.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.8

3.3. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.31	1.31	< 0.005	0.13	0.13	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.48	1.35	< 0.005	0.07	—	0.07	0.06	—	0.06	—	218	218	0.01	< 0.005	—	218
Dust From Material Movement	—	—	—	—	—	—	0.81	0.81	—	0.42	0.42	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.27	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.0	36.0	< 0.005	< 0.005	—	36.2
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.0	48.0	< 0.005	0.01	< 0.005	50.2
Hauling	0.04	0.01	0.61	0.21	< 0.005	0.01	0.08	0.08	0.01	0.02	0.03	—	303	303	0.03	0.05	0.02	318

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.54	7.54	< 0.005	< 0.005	0.01	7.65
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.07
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	13.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.06	2.06	< 0.005	< 0.005	< 0.005	2.17

3.4. Site Preparation (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.48	1.35	< 0.005	0.07	—	0.07	0.06	—	0.06	—	218	218	0.01	< 0.005	—	218

Dust From Material Movement	—	—	—	—	—	—	0.32	0.32	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.27	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.0	36.0	< 0.005	< 0.005	—	36.2
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.0	48.0	< 0.005	0.01	< 0.005	50.2
Hauling	0.04	0.01	0.61	0.21	< 0.005	0.01	0.08	0.08	0.01	0.02	0.03	—	303	303	0.03	0.05	0.02	318
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.54	7.54	< 0.005	< 0.005	0.01	7.65
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.07
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	13.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34

Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.06	2.06	< 0.005	< 0.005	< 0.005	2.17

3.5. Grading (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.31	1.31	< 0.005	0.13	0.13	—	5.40	5.40	< 0.005	< 0.005	0.01	5.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.31	1.31	< 0.005	0.13	0.13	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.75	0.77	< 0.005	0.03	—	0.03	0.03	—	0.03	—	122	122	< 0.005	< 0.005	—	122

Dust From Material Movement	—	—	—	—	—	—	0.29	0.29	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.06	1.15	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	201	201	0.01	0.01	0.82	205
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.12	50.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.0	48.0	< 0.005	0.01	< 0.005	50.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.54	7.54	< 0.005	< 0.005	0.01	7.65
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.07
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	5.40	5.40	< 0.005	< 0.005	0.01	5.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.08	0.75	0.77	< 0.005	0.03	—	0.03	0.03	—	0.03	—	122	122	< 0.005	< 0.005	—	122
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.06	1.15	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	201	201	0.01	0.01	0.82	205
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.12	50.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.0	48.0	< 0.005	0.01	< 0.005	50.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.54	7.54	< 0.005	< 0.005	0.01	7.65

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.07
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.31	1.31	< 0.005	0.13	0.13	—	5.40	5.40	< 0.005	< 0.005	0.01	5.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.31	1.31	< 0.005	0.13	0.13	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.41	3.84	4.49	0.01	0.17	—	0.17	0.16	—	0.16	—	821	821	0.03	0.01	—	824
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.45	0.45	< 0.005	0.04	0.04	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.95

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.70	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	136
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.06	1.15	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	201	201	0.01	0.01	0.82	205
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.12	50.3
Hauling	0.04	0.01	0.57	0.21	< 0.005	0.01	0.08	0.08	0.01	0.02	0.03	—	303	303	0.03	0.05	0.63	319
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.0	48.0	< 0.005	0.01	< 0.005	50.2
Hauling	0.04	0.01	0.61	0.21	< 0.005	0.01	0.08	0.08	0.01	0.02	0.03	—	303	303	0.03	0.05	0.02	318
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	62.9	62.9	< 0.005	< 0.005	0.12	63.8
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.5	16.5	< 0.005	< 0.005	0.02	17.2
Hauling	0.01	< 0.005	0.20	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	0.01	0.02	0.09	109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.02	10.6
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.72	2.72	< 0.005	< 0.005	< 0.005	2.85
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.2	17.2	< 0.005	< 0.005	0.02	18.0

3.8. Building Construction (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	5.40	5.40	< 0.005	< 0.005	0.01	5.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.41	3.84	4.49	0.01	0.17	—	0.17	0.16	—	0.16	—	821	821	0.03	0.01	—	824
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.95
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.70	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	136
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.06	1.15	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	201	201	0.01	0.01	0.82	205
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.12	50.3

Hauling	0.04	0.01	0.57	0.21	< 0.005	0.01	0.08	0.08	0.01	0.02	0.03	—	303	303	0.03	0.05	0.63	319
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.0	48.0	< 0.005	0.01	< 0.005	50.2
Hauling	0.04	0.01	0.61	0.21	< 0.005	0.01	0.08	0.08	0.01	0.02	0.03	—	303	303	0.03	0.05	0.02	318
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	62.9	62.9	< 0.005	< 0.005	0.12	63.8
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.5	16.5	< 0.005	< 0.005	0.02	17.2
Hauling	0.01	< 0.005	0.20	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	0.01	0.02	0.09	109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.02	10.6
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.72	2.72	< 0.005	< 0.005	< 0.005	2.85
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.2	17.2	< 0.005	< 0.005	0.02	18.0

3.9. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	3.15	5.03	0.01	0.14	—	0.14	0.13	—	0.13	—	763	763	0.03	0.01	—	765

Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.31	1.31	< 0.005	0.13	0.13	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.52	0.83	< 0.005	0.02	—	0.02	0.02	—	0.02	—	125	125	0.01	< 0.005	—	126
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.8	20.8	< 0.005	< 0.005	—	20.8
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	72.0	72.0	0.01	0.01	< 0.005	75.3
Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	0.01	0.02	0.01	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.2	30.2	< 0.005	< 0.005	0.06	30.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.8	11.8	< 0.005	< 0.005	0.01	12.4
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.9	24.9	< 0.005	< 0.005	0.02	26.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.00	5.00	< 0.005	< 0.005	0.01	5.07
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.96	1.96	< 0.005	< 0.005	< 0.005	2.05
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.12	4.12	< 0.005	< 0.005	< 0.005	4.33

3.10. Building Construction (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	3.15	5.03	0.01	0.14	—	0.14	0.13	—	0.13	—	763	763	0.03	0.01	—	765
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	5.38	5.38	< 0.005	< 0.005	< 0.005	5.66
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.52	0.83	< 0.005	0.02	—	0.02	0.02	—	0.02	—	125	125	0.01	< 0.005	—	126
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.8	20.8	< 0.005	< 0.005	—	20.8
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.08	0.08	0.86	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	179	179	0.01	0.01	0.02	181
Vendor	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	72.0	72.0	0.01	0.01	< 0.005	75.3
Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	0.01	0.02	0.01	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.2	30.2	< 0.005	< 0.005	0.06	30.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.8	11.8	< 0.005	< 0.005	0.01	12.4
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.9	24.9	< 0.005	< 0.005	0.02	26.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.00	5.00	< 0.005	< 0.005	0.01	5.07
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.96	1.96	< 0.005	< 0.005	< 0.005	2.05
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.12	4.12	< 0.005	< 0.005	< 0.005	4.33

3.11. Paving (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.31	1.31	< 0.005	0.13	0.13	—	5.40	5.40	< 0.005	< 0.005	0.01	5.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.07	0.64	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.06	1.15	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	201	201	0.01	0.01	0.82	205
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.12	50.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.1	15.1	< 0.005	< 0.005	0.03	15.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.95	3.95	< 0.005	< 0.005	< 0.005	4.13
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.50	2.50	< 0.005	< 0.005	< 0.005	2.53
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.68
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	5.40	5.40	< 0.005	< 0.005	0.01	5.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.64	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.6	20.6	< 0.005	< 0.005	—	20.6
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.09	0.06	1.15	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	201	201	0.01	0.01	0.82	205
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.12	50.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.1	15.1	< 0.005	< 0.005	0.03	15.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.95	3.95	< 0.005	< 0.005	< 0.005	4.13
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.50	2.50	< 0.005	< 0.005	< 0.005	2.53
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.68
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. 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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.17	0.16	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	346	346	0.01	0.01	1.30	352
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.17	0.16	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	346	346	0.01	0.01	1.30	352
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.16	0.14	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	316	316	0.02	0.02	0.03	321
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.14	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	316	316	0.02	0.02	0.03	321
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	31.3	31.3	< 0.005	< 0.005	0.05	31.8
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	31.3	31.3	< 0.005	< 0.005	0.05	31.8

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.17	0.16	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	346	346	0.01	0.01	1.30	352
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.17	0.16	0.16	1.57	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	346	346	0.01	0.01	1.30	352
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.16	0.14	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	316	316	0.02	0.02	0.03	321
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.14	0.19	1.30	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	316	316	0.02	0.02	0.03	321
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	31.3	31.3	< 0.005	< 0.005	0.05	31.8

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.02	0.02	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	31.3	31.3	< 0.005	< 0.005	0.05	31.8

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	257	257	0.01	< 0.005	—	257
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	29.4	29.4	< 0.005	< 0.005	—	29.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	7.19	7.19	< 0.005	< 0.005	—	7.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	293	293	0.01	< 0.005	—	294
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	257	257	0.01	< 0.005	—	257
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	29.4	29.4	< 0.005	< 0.005	—	29.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	7.19	7.19	< 0.005	< 0.005	—	7.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	293	293	0.01	< 0.005	—	294

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	42.5	42.5	< 0.005	< 0.005	—	42.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	4.87	4.87	< 0.005	< 0.005	—	4.88
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	1.19	1.19	< 0.005	< 0.005	—	1.19
Total	—	—	—	—	—	—	—	—	—	—	—	—	48.6	48.6	< 0.005	< 0.005	—	48.7

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	257	257	0.01	< 0.005	—	257
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	29.4	29.4	< 0.005	< 0.005	—	29.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	7.19	7.19	< 0.005	< 0.005	—	7.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	293	293	0.01	< 0.005	—	294
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	257	257	0.01	< 0.005	—	257
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	29.4	29.4	< 0.005	< 0.005	—	29.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	7.19	7.19	< 0.005	< 0.005	—	7.20

Total	—	—	—	—	—	—	—	—	—	—	—	—	293	293	0.01	< 0.005	—	294
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	42.5	42.5	< 0.005	< 0.005	—	42.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	4.87	4.87	< 0.005	< 0.005	—	4.88
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	1.19	1.19	< 0.005	< 0.005	—	1.19
Total	—	—	—	—	—	—	—	—	—	—	—	—	48.6	48.6	< 0.005	< 0.005	—	48.7

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3.1. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	8.76	8.76	< 0.005	< 0.005	—	8.78
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.12	0.12	< 0.005	< 0.005	—	0.12
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	8.76	8.76	< 0.005	< 0.005	—	8.78
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.12	0.12	< 0.005	< 0.005	—	0.12
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	1.45	1.45	< 0.005	< 0.005	—	1.45
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.02	0.02	< 0.005	< 0.005	—	0.02
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	1.47	1.47	< 0.005	< 0.005	—	1.47

4.4.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	8.76	8.76	< 0.005	< 0.005	—	8.78
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.12	0.12	< 0.005	< 0.005	—	0.12
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	8.76	8.76	< 0.005	< 0.005	—	8.78
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.12	0.12	< 0.005	< 0.005	—	0.12
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	8.87	8.87	< 0.005	< 0.005	—	8.89
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	1.45	1.45	< 0.005	< 0.005	—	1.45
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.02	0.02	< 0.005	< 0.005	—	0.02
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	1.47	1.47	< 0.005	< 0.005	—	1.47

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.06	0.00	0.06	0.01	0.00	—	0.19
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.06	0.00	0.06	0.01	0.00	—	0.19

4.5.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.34	0.00	0.34	0.03	0.00	—	1.18
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.06	0.00	0.06	0.01	0.00	—	0.19

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.06	0.00	0.06	0.01	0.00	—	0.19

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

4.6.2. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

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

4.8.2. Mitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	3/1/2024	3/21/2024	5.00	15.0	—
Site Preparation	Site Preparation	3/1/2024	3/21/2024	5.00	15.0	—
Grading	Grading	3/22/2024	4/11/2024	5.00	15.0	—
Building Construction 1	Building Construction	4/12/2024	10/3/2024	5.00	125	—
Building Construction 2	Building Construction	10/4/2024	12/26/2024	5.00	60.0	—
Paving	Paving	5/1/2024	6/11/2024	5.00	30.0	—
Architectural Coating	Architectural Coating	12/1/2024	12/31/2024	5.00	22.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction 1	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction 1	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction 1	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction 1	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction 1	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction 2	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

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

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction 1	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction 1	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction 1	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction 1	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction 1	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction 2	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Demolition	—	—	—	—
Demolition	Worker	20.0	12.4	LDA,LDT1,LDT2
Demolition	Vendor	2.00	7.10	HHDT,MHDT
Demolition	Hauling	20.0	20.0	HHDT
Demolition	Onsite truck	1.00	1.00	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	20.0	12.4	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	7.10	HHDT,MHDT
Site Preparation	Hauling	4.00	20.0	HHDT
Site Preparation	Onsite truck	1.00	1.00	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	12.4	LDA,LDT1,LDT2
Grading	Vendor	2.00	7.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	1.00	1.00	HHDT
Building Construction 1	—	—	—	—
Building Construction 1	Worker	20.0	12.4	LDA,LDT1,LDT2
Building Construction 1	Vendor	2.00	7.10	HHDT,MHDT
Building Construction 1	Hauling	4.00	20.0	HHDT
Building Construction 1	Onsite truck	1.00	1.00	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	12.4	LDA,LDT1,LDT2
Paving	Vendor	2.00	7.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	1.00	1.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	12.4	LDA,LDT1,LDT2

Architectural Coating	Vendor	0.00	7.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT
Building Construction 2	—	—	—	—
Building Construction 2	Worker	20.0	12.4	LDA,LDT1,LDT2
Building Construction 2	Vendor	3.00	7.10	HHDT,MHDT
Building Construction 2	Hauling	2.00	20.0	HHDT
Building Construction 2	Onsite truck	1.00	1.00	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	20.0	12.4	LDA,LDT1,LDT2
Demolition	Vendor	2.00	7.10	HHDT,MHDT
Demolition	Hauling	20.0	20.0	HHDT
Demolition	Onsite truck	1.00	1.00	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	20.0	12.4	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	7.10	HHDT,MHDT
Site Preparation	Hauling	4.00	20.0	HHDT
Site Preparation	Onsite truck	1.00	1.00	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	12.4	LDA,LDT1,LDT2
Grading	Vendor	2.00	7.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	1.00	1.00	HHDT
Building Construction 1	—	—	—	—

Building Construction 1	Worker	20.0	12.4	LDA,LDT1,LDT2
Building Construction 1	Vendor	2.00	7.10	HHDT,MHDT
Building Construction 1	Hauling	4.00	20.0	HHDT
Building Construction 1	Onsite truck	1.00	1.00	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	12.4	LDA,LDT1,LDT2
Paving	Vendor	2.00	7.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	1.00	1.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	12.4	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	7.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT
Building Construction 2	—	—	—	—
Building Construction 2	Worker	20.0	12.4	LDA,LDT1,LDT2
Building Construction 2	Vendor	3.00	7.10	HHDT,MHDT
Building Construction 2	Hauling	2.00	20.0	HHDT
Building Construction 2	Onsite truck	1.00	1.00	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	0.00	1,760	3,267

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,500	—
Site Preparation	0.00	0.00	15.0	0.00	—
Grading	0.00	0.00	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.25

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
City Park	0.00	0%
Parking Lot	0.75	100%
Other Asphalt Surfaces	0.50	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	375	0.01	< 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
City Park	14.5	29.0	32.6	6,994	174	349	393	84,160
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
City Park	14.5	29.0	32.6	6,994	174	349	393	84,160
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

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	0.00	0.00	3,267

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
City Park	250,000	375	0.0129	0.0017	0.00
Parking Lot	28,619	375	0.0129	0.0017	0.00
Other Asphalt Surfaces	7,000	375	0.0129	0.0017	0.00

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
City Park	250,000	375	0.0129	0.0017	0.00
Parking Lot	28,619	375	0.0129	0.0017	0.00
Other Asphalt Surfaces	7,000	375	0.0129	0.0017	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
City Park	0.00	5,288,040
Parking Lot	0.00	69,832
Other Asphalt Surfaces	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
City Park	0.00	5,288,040
Parking Lot	0.00	69,832
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
City Park	0.62	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
City Park	0.62	—
Parking Lot	0.00	—
Other Asphalt Surfaces	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
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	21.8	annual days of extreme heat
Extreme Precipitation	6.35	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	1	1	1	2
Extreme Precipitation	2	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2

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	59.7
AQ-PM	39.3
AQ-DPM	77.2
Drinking Water	67.6
Lead Risk Housing	61.8
Pesticides	0.00
Toxic Releases	21.4
Traffic	85.5
Effect Indicators	—
CleanUp Sites	19.0
Groundwater	6.97
Haz Waste Facilities/Generators	56.7
Impaired Water Bodies	58.7
Solid Waste	0.00

Sensitive Population	—
Asthma	94.3
Cardio-vascular	79.9
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	32.9
Housing	68.5
Linguistic	27.3
Poverty	64.5
Unemployment	44.4

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	31.48979854
Employed	9.136404466
Median HI	31.13050173
Education	—
Bachelor's or higher	48.40241242
High school enrollment	100
Preschool enrollment	65.76414731
Transportation	—
Auto Access	33.77389965
Active commuting	54.47196202
Social	—
2-parent households	75.92711408

Voting	57.17952008
Neighborhood	—
Alcohol availability	41.17798024
Park access	38.6629026
Retail density	88.57949442
Supermarket access	22.61003465
Tree canopy	89.25959194
Housing	—
Homeownership	42.78198383
Housing habitability	58.78352368
Low-inc homeowner severe housing cost burden	85.11484666
Low-inc renter severe housing cost burden	28.57692801
Uncrowded housing	66.03361992
Health Outcomes	—
Insured adults	54.83125882
Arthritis	0.0
Asthma ER Admissions	6.9
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	2.4
Cognitively Disabled	11.9
Physically Disabled	50.9
Heart Attack ER Admissions	24.9

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	99.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	76.4
Elderly	30.4
English Speaking	42.3
Foreign-born	33.9
Outdoor Workers	68.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	63.4
Traffic Density	93.3
Traffic Access	87.4
Other Indices	—
Hardship	52.6
Other Decision Support	—
2016 Voting	38.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	40.0
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	Renfree Field Renovation - Parking lot demo, repave parking area, basketball and pickleball courts, new field, new path, and area west of bridge road.
Construction: Construction Phases	Construction duration 8-10 months
Construction: Trips and VMT	Vendor and onsite travel added
Construction: Architectural Coatings	1,760 sq ft for pickleball court surfacing
Operations: Energy Use	Lighting for field and courts added
Operations: Refrigerants	No refrigerants
Construction: Dust From Material Movement	none

Construction: Off-Road Equipment	Building construction 2 is for plant establishment
Operations: Vehicle Data	Increased weekday trips