Karve Ski Park Project

Greenhouse Gas Emissions Technical Report

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Acronyms and Abbreviations

AB	Assembly Bill
ADA	Americans with Disabilities Act
APN	Assessor's Parcel Number
AR4	Fourth Assessment Report
AR5	Fifth Assessment Report
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
C_2F_6	hexafluoroethane
CAA	Clean Air Act (Federal)
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emission Estimator Model
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBSC	California Building Standards Commission
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CF_4	tetrafluoromethane
CFCs	chlorofluorocarbons
CH_4	methane
Checklist	Climate Action Plan Consistency Review Checklist
CNRA	California Natural Resources Agency
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of San Diego
EO	Executive Order
EPIC	Energy Policy Initiative Center
EV	electric vehicle
EVSE	electric vehicle supply equipment
GHG	greenhouse gas
GWP	global warming potential
HFCs	hydrofluorocarbons
I-15	Interstate 15
IPCC	Intergovernmental Panel on Climate Change

Acronyms and Abbreviations (cont.)

LCFS	Low Carbon Fuel Standard
MMT	million metric tons
MPO	Metropolitan Planning Organization
MT	metric ton
N_2O	nitrous oxide
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
PBL	Planbureau voor de Leefomgeving
PFCs	perfluorocarbons
ppm	parts per million
project	Karve Ski Park Project
Regional Plan	San Diego Forward: The 2021 Regional Plan
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SAR	Second Assessment Report
SARA	Solar Access Roof Area
SB	Senate Bill
SCS	Sustainable Communities Strategy
SEIR	supplemental environmental impact report
SF_6	sulfur hexafluoride
SWRCB	State Water Resources Control Board
UNFCCC	United Nations Framework Convention on Climate Change
USD	University of San Diego
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled

EXECUTIVE SUMMARY

This report presents an assessment of potential greenhouse gas (GHG) emissions impacts associated with the proposed Karve Ski Park Project (project). The project proposes to develop a 10.45-acre synthetic ski park (also known as a dry ski slope) located at 26351 North Centre City Parkway in the unincorporated Jesmond Dene community north of the City of Escondido within the North County Metro community planning area of San Diego County. The ski park would be an outdoor, year-round synthetic snow sports facility and recreational park catering to all ages, abilities, and skill levels. The primary activities would be the ones that take place at the artificial ski slope which mimics the attributes of snow for both day and nighttime skiing and snowboarding. The analysis addresses whether the project would be consistent with the San Diego County General Plan growth projections, the San Diego Association of Governments' (SANDAG's) "San Diego Forward: The Regional Plan" (Regional Plan), and the California Air Resource Board's (CARB's) Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The analysis also estimates the amount of GHG emissions that would occur from construction and operation of the project.

The project would result in GHG emissions during both its construction and operational phases. Construction GHG emissions would be from heavy construction equipment, hauling trucks, and worker/vendor vehicle use. Operational GHG emissions would be generated from project vehicle miles traveled (VMT), energy use, water use, wastewater generation, and solid waste generation.

The project would not conflict with or obstruct the implementation of GHG reduction plans, including the Regional Plan or the 2022 Scoping Plan. The significance of the project's GHG emissions was evaluated using the Bay Area Air Quality Management District's performance standard (qualitative) GHG thresholds adopted in 2022. which require the project to: have no natural gas appliances or natural gas plumbing; have no wasteful, inefficient, or unnecessary energy use; result in no net increase in VMT for commercial/retail projects; and install electric vehicle (EV) charging infrastructure in accordance with CALGreen Tier 2 voluntary measures. The analysis concludes that the project would not result in a net increase in existing VMT and would not result in wasteful, inefficient, or unnecessary energy use. Additionally, the project is designed to be all-electric (no natural gas) and would install electric vehicle infrastructure and charging stations in accordance with CALGreen Tier 2 voluntary measures. Therefore, the project's GHG emissions would be less than significant.

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1.0 INTRODUCTION

This report analyzes the significance of the proposed Karve Ski Park Project's (project) consistency with applicable regional and statewide greenhouse gas (GHG) reduction plans, and the contribution of GHG emissions to statewide GHG emissions and GHG emission reduction targets and goals.

1.1 PROJECT LOCATION

The project site is located at 26351 North Centre City Parkway in the unincorporated Jesmond Dene community north of the City of Escondido within the North County Metro community planning area of San Diego County. The project location lies east of Interstate 15 (I-15), south of the Deer Springs Road/Mountain Meadow Road exit. The project area is bordered by Tierra Libertia Road to the north, Jesmond Dene Road to the south and southwest, North Centre City Parkway to the west, and residential parcels to the east. The approximately 10.45-acre project site consists of Assessor's Parcel Numbers (APNs) 187-630-12-00 and 187-322-29-00. See Figure 1, *Regional Location*, and Figure 2, *Aerial Photograph*.

1.2 PROJECT DESCRIPTION

The project proposes to construct an outdoor recreation facility consisting of a dry slope for skiing, snowboarding, and inner tubing. Proposed recreation features include three slopes of artificial synthetic material, a zipline and jump tower, a golf driving range, and a "magic carpet" lift station to transport guests to the top of the slopes. Four buildings totaling 9,525 square feet would provide associated amenities, including a box office, guest services, management offices, and a first aid station; a food court and bar with Americans with Disabilities Act (ADA)-compliant restrooms; an equipment rental and event room space; and a maintenance and storage shed. The northwestern portion of the property would be converted to a 146-space parking lot. See Figure 3, *Site Plan*. As part of the project, best management practices (BMPs) would be incorporated to control GHG emissions during project construction activities, see Section 1.3, below.

1.3 BEST MANAGEMENT PRACTICES FOR CONSTRUCTION-RELATED GHG EMISSIONS

The project would incorporate the following BMPs during construction to reduce GHG emissions:

1. Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (A 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.

2. Prohibit off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.

3. Use California Air Resources Board-approved renewable diesel fuel in off-road construction equipment and on-road trucks.

4. Require all construction equipment is maintained and properly tuned in accordance with manufacturer's specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.

5. Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.

6. Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.

7. Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.

8. Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15% more by weight than the diversion requirement in Title 24.

9. Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.

10. Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities.

2.0 ENVIRONMENTAL SETTING

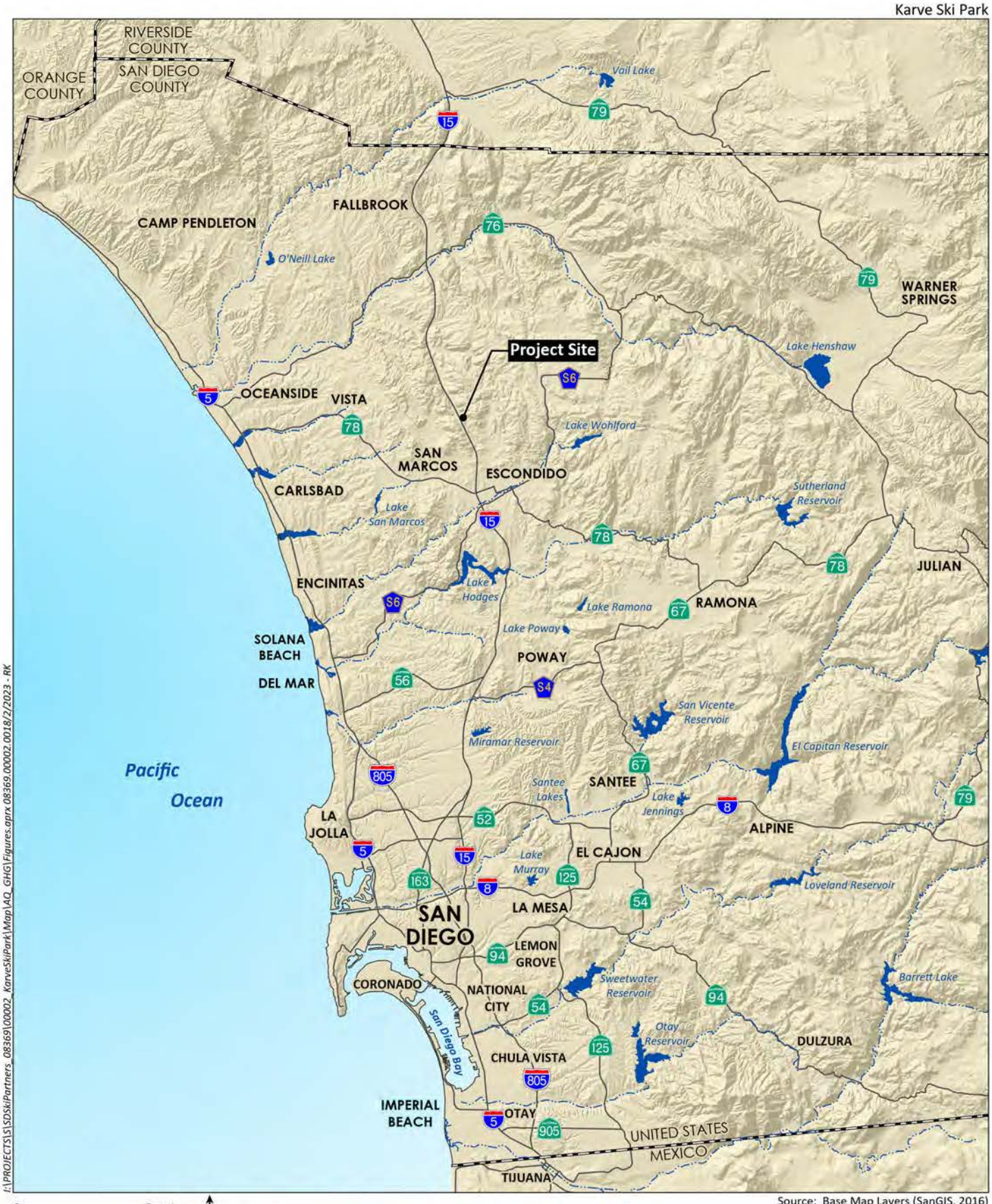
2.1 UNDERSTANDING GLOBAL CLIMATE CHANGE

Global climate change refers to changes in average climatic conditions on Earth, as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by allowing solar radiation (sunlight) into the Earth's atmosphere but preventing radiative heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming, with 2016 and 2020 global surface temperatures tied for the warmest year on record since 1880 (National Aeronautics and Space Administration [NASA] 2023a). The newest release in long-term warming trends announced 2022 ranked as tied with 2015 for the sixth warmest year on record with an increase of 1.6 degrees Fahrenheit compared to the 1951-1980 average (NASA 2023b). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions

Karve Ski Park



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0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

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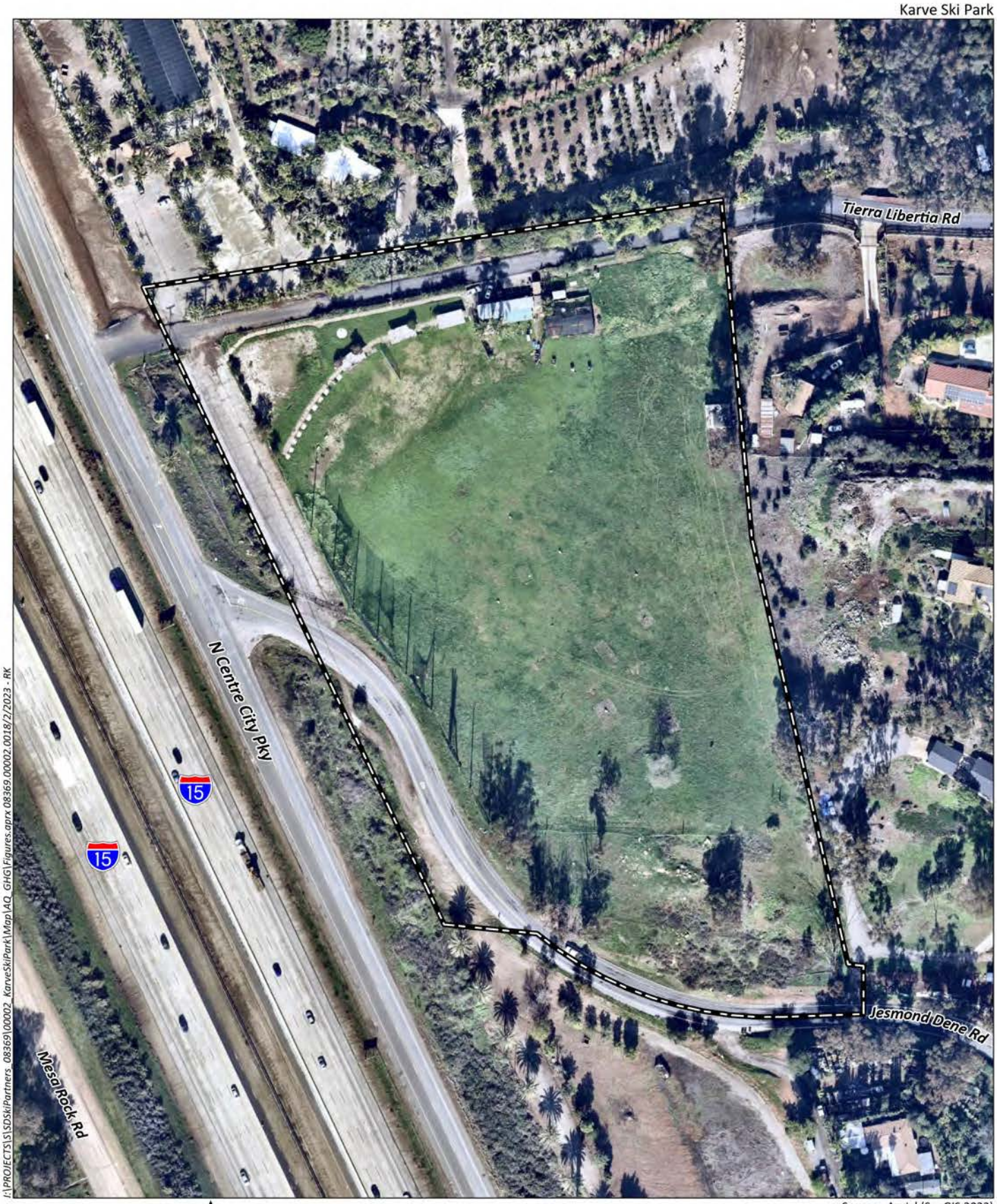
Regional Location

Figure 1



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Source: Aerial (SanGIS 2023)

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Aerial Photograph

Figure 2

Source: Howard Associates 2024

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Site Plan

Figure 3

could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).

2.2 GREENHOUSE GASES OF PRIMARY CONCERN

The GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Although water vapor is the most abundant and variable GHG in the atmosphere, it is not considered a pollutant; it maintains a climate necessary for life.

Carbon Dioxide. CO_2 is the most important and common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). As of June 2023, the CO_2 concentration exceeded 423 ppm, a 51 percent increase since 1750 (National Oceanic and Atmospheric Administration [NOAA] 2023).

Methane. CH_4 is a gas and is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Fluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, because methane and N_2O are approximately 25 and

298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). CO_2e is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). In 2007, IPCC updated the GWP values based on the latest science at the time in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. In 2013, IPCC again updated the GWP values based on the latest science in its Fifth Assessment Report (AR5) (IPCC 2013). However, United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the AR4. To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported using AR4 GWP values. Therefore, statewide and national GHG inventories have not yet updated their GWP values to the AR5 values. By applying the GWP ratios, project related CO_2e emissions can be tabulated in metric tons (MT) per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 1, *Global Warming Potentials and Atmospheric Lifetimes*. As shown in the table, the GWP for common GHGs ranges from 1 (CO_2) to 22,800 (SF_6).

Table 1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-134a	14	1,430
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC 2007.
HFC: hydrofluorocarbon; PFC: perfluorocarbon

2.3 WORLDWIDE AND NATIONAL GHG INVENTORY

In 2020, total anthropogenic GHG emissions worldwide were estimated at 49,800 million metric tons (MMT) of CO_2e emissions (Planbureau voor de Leefomgeving [PBL] 2022). The five largest emitting countries and the European Union (EU-27), together account for about 60 percent of total global GHG emissions: China (27%), the United States (12%), the European Union (about 7%), India (7%), the Russian Federation (4.5%) and Japan (2.4%). These countries also have the highest CO_2 emission levels (PBL 2022).

Per the US Environmental Protection Agency (USEPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2020, total United States GHG emissions were approximately 5,981 MMT CO_2e in 2020 (USEPA 2022). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 76.4% of total GHG emissions (4,760 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8% of

CO_2 emissions in 2018 (5,031.8 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2020 are lower by 7.3%, down from a high of 15.2% above 1990 levels in 2007. GHG emissions decreased from 2019 to 2020 by 10.6% and overall, net emissions in 2020 were 21.4% below 2005 levels (USEPA 2022).

2.4 STATE GHG INVENTORIES

The California Air Resources Board (CARB) performed statewide inventories for the years 1990 to 2020, as shown in Table 2, *California State Greenhouse Gas Emissions by Sector*. The inventory is divided into six broad sectors of economic activity: agriculture, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO_2e. As shown in Table 2, statewide GHG source emissions totaled 431 MMT CO_2e in 1990, 462 MMT CO_2e in 2000, 442 MMT CO_2e in 2010, and 381 MMT CO_2e in 2021. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions (CARB 2007 and CARB 2024).

Table 2
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	Emissions (MMT CO_2e)			
	1990	**2000**	**2010**	**2021**
Agriculture and Forestry	18.9 (4%)	30.8 (7%)	34.0 (8%)	30.9 (8%)
Commercial	14.4 (3%)	14.6 (3%)	20.1 (5%)	22.5 (6%)
Electricity Generation	110.5 (26%)	105.2 (23%)	90.6 (20%)	62.6 (16%)
Industrial	105.3 (24%)	100.8 (22%)	97.9 (22%)	85.3 (22%)
Residential	29.7 (7%)	31.6 (7%)	32.1 (7%)	30.5 (8%)
Transportation	150.6 (35%)	178.5 (39%)	168.0 (38%)	149.5 (39%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	0.0 (0%)
Total	**430.7**	**461.6**	**442.7**	**381.3**

Source: CARB 2007 and CARB 2024.
MMT = million metric tons; CO_2e = carbon dioxide equivalent

2.5 REGIONAL GHG INVENTORY

A San Diego regional emissions inventory that was prepared by the University of San Diego (USD) School of Law, Energy Policy Initiative Center (EPIC) accounted for the unique characteristics of the region. Its 2019 emissions inventory update for San Diego is presented in Table 3, *San Diego County GHG Emissions by Sector in 2019*. The sectors included in this inventory are somewhat different from those in the statewide inventory. Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

Table 3
SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR IN 2019

Sector	2019 Emissions MT CO_2e (% total)[1]
On-Road Transportation	1,331,000 (45%)
Electricity	599,000 (20%)
Natural Gas	478,000 (16%)
Solid Waste	193,000 (6%)
Agriculture	134,000 (4%)

Sector	2019 Emissions MT CO_2e (% total)[1]
Propane	121,000 (4%)
Off-Road Transportation	71,000 (2%)
Water	39,000 (1%)
Wastewater	18,000 (1%)
Total	**2,984,000**

Source: USD EPIC 2023. Unincorporated County of San Diego 2019 Greenhouse Gas Inventory and Projections. Prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC).

[1] Percentages may not total 100 due to rounding.

MMT = million metric tons; CO_2e = carbon dioxide equivalent

3.0 REGULATORY SETTING

3.1 FEDERAL GREENHOUSE GAS REGULATIONS

3.1.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* that CO_2 is an air pollutant, as defined under the Clean Air Act (CAA), and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people (USEPA 2023). This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA).

On June 30, 2022, the U.S. Supreme Court decision published in *West Virginia v. U.S. Environmental Protection Agency* overturned the USEPA's Clean Power Plan rule which cited Section 111(d) of the CAA for authority to set limits on CO_2 emissions from existing coal- and natural-gas-fired power plants. The June 30, 2022, decision does not overturn the April 2, 2007, decision; however, it may limit the USEPA's authority to develop rules limiting GHG emissions without clear congressional authorization.

3.1.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025.

In December 2021, USEPA issued a new rule formally adopting standards previously proposed in August 2021 for model years 2023 and 2024 and finalizing more stringent standards than previously proposed for model years 2025 and 2026. The rule assumes a 17 percent EV market penetration by 2026. Although this is a departure from the NHTSA CAFE standards, USEPA did coordinate with NHTSA during development of the new standards. On April 12, 2023, USEPA announced new, more ambitious

proposed standards to further reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027. The proposal builds upon USEPA's final standards for federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026 and leverages advances in clean car technology to result in benefits to Americans ranging from reducing climate pollution, to improving public health, to saving drivers money through reduced fuel and maintenance costs. The proposed standards would phase in over model years 2027 through 2032.

3.2 STATE GREENHOUSE GAS REGULATIONS

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, renewable energy, and energy procurement, building energy, mobile sources, solid waste, water, and other state regulations and goals. The following text describes executive orders (EOs), legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

3.2.1 State Climate Change Targets

3.2.1.1 Executive Order S-3-05

On June 1, 2005, EO S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. In an effort to avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. EOs are not laws and can only provide the governor's direction to state agencies to act within their authority. Legislation is required to enact the goals of EO S-3-05 and establish a framework for statewide implementation. AB 32, described below, mandates the 2020 GHG emissions reduction goals of EO S-3-05. The 2050 GHG emissions reduction goal of EO S-3-05 has not been enacted by any legislation and remains only a goal of the EO.

3.2.1.2 Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599), widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 enacts the goals of EO S-3-05.

3.2.1.3 Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28-nation European Union. The emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050. Senate Bill (SB) 32, described below, mandates the 2030 GHG emission reduction goals of EO B-30-15.

3.2.1.4 Senate Bill 32

SB 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the state's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

3.2.1.5 Assembly Bill 1279

Approved by Governor Newsom on September 16, 2022, AB 1279, *The California Climate Crisis Act*, declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of CO_2 from the atmosphere (carbon capture), and almost complete transition away from fossil fuels.

3.2.1.6 Senate Bill 905

Approved by Governor Newsom on September 16, 2022, SB 905, *Carbon sequestration: Carbon Capture, Removal, Utilization, and Storage Program*, requires CARB to establish a Carbon Capture, Removal, Utilization, and Storage Program to evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and CO_2 removal technologies and facilitate the capture and sequestration of CO_2 from those technologies, where appropriate. SB 905 is an integral part of achieving the state policies mandated in AB 1279.

3.2.1.7 California Air Resources Board Scoping Plan

The Scoping Plan is a strategy CARB develops and updates at least one every five years, as required by AB 32. It lays out the transformations needed across our society and economy to reduce emissions and reach our climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG emissions targets. The 2013 Scoping Plan assessed progress toward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants. The 2017 Scoping Plan also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by at least 40 percent below 1990 levels by 2030. On December 15, 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in short-lived climate pollutants; support for sustainable development; increased action on natural and

working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (CARB 2022a).

3.2.2 Renewable Energy and Energy Procurement

3.2.2.1 Senate Bill 1078

SB 1078 (Sher) (September 2002) established the Renewable Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently revised as described below.

3.2.2.2 Senate Bill 1368

SB 1368 (September 2006) required the California Energy Commission (CEC) to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission.

3.2.2.3 Assembly Bill 1109

Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting, to reduce electricity consumption 50 percent for indoor residential lighting and 25 percent for indoor commercial lighting.

3.2.2.4 Executive Order S-14-08

EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The California Natural Resources Agency (CNRA), through collaboration with the CEC and California Department of Fish and Wildlife (formerly the California Department of Fish and Game), was directed to lead this effort.

3.2.2.5 Executive Order S-21-09 and Senate Bill X1-2

EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with the California Public Utilities Commission and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, statutes of 2011) signed by Governor Brown in April 2011.

SB X1-2 expanded the RPS by establishing a renewable energy target of 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location.

SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet the renewable energy goals previously listed.

3.2.2.6 Senate Bill 350

SB 350 (October 2015, Clean Energy and Pollution Reduction Act) further expanded the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. Regarding mobile sources, as one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code Section 740.12).

3.2.2.7 Senate Bill 100

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100 percent zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

3.2.2.8 Senate Bill 1020

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers come from eligible renewable energy resources and zero-carbon resources:

- 90 percent by December 31, 2035;
- 95 percent by December 31, 2040; and
- 100 percent by December 31, 2045.

3.2.3 Building Energy

3.2.3.1 California Code of Regulations, Title 24, Part 6

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions.

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest update to the Title 24 standards occurred in 2022 and went into effect on January 1, 2023. The Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. While all energy codes are moving toward a goal of net zero energy consumption buildings, California is aiming for the more aggressive target date of 2030 for commercial projects, which would apply to the Pure Water buildings. Specifically, the Title 24 code's goal is for all new commercial construction and 50 percent of commercial buildings retrofits to achieve net zero energy consumption by 2030 (the state building target is 2025). To achieve incremental movement toward this goal, changes in the 2022 code are numerous and aggressive. For example, new buildings must comply with the new Solar Access Roof Area (SARA) requirements and all buildings required to have a photovoltaic system must also have a properly sized battery system. The standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards–the energy budgets–that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach (CEC 2022).

3.2.3.2 California Green Building Standards Code

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including industrial buildings) throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the CCR. The current 2022 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2023 (California Building Standards Commission [CBSC] 2022).

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building

commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

3.2.4 Mobile Sources

3.2.4.1 Assembly Bill 1493 and Advanced Clean Cars

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepared California to merge its rules with the federal CAFE rules for passenger vehicles (CARB 2022b).

In January 2012, CARB approved Advanced Clean Cars I, a new emissions-control program for model years 2017 through 2025 including low emissions vehicle and zero-emissions vehicle criteria. The Advanced Clean Cars II regulations were adopted in 2022, imposing the next level of low-emission and zero-emission vehicle standards for model years 2026 through 2035 that contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality targets.

By 2035 all new passenger cars, trucks, and SUVs sold in California will be zero emissions. The Advanced Clean Cars II regulations take the state's already growing zero-emission vehicle market and robust motor vehicle emission control rules and augments them to meet more aggressive tailpipe emissions standards and ramp up to 100 percent zero-emission vehicles.

3.2.4.2 Executive Order S-01-07

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs the CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit Court of Appeals reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. CARB, therefore, is continuing to implement the LCFS statewide.

3.2.4.3 Senate Bill 375

SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPOs' Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline California Environmental Quality Act (CEQA) processing.

3.2.4.4 Executive Order N-79-20

EO N-79-20, signed by Governor Newsom on September 23, 2020, establishes three goals for implementation of zero emissions vehicles in California: first, 100 percent of in-state sales of new passenger cars and trucks will be zero-emissions by 2035; second, 100 percent of medium- and heavy-duty vehicles in the state will be zero-emissions vehicles by 2045 for all operations where feasible, and by 2035 for drayage trucks; and third, 100 percent of off-road vehicles and equipment will be zero emissions by 2035 where feasible.

3.2.5 Solid Waste

3.2.5.1 Assembly Bill 939

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board to oversee a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000.

3.2.5.2 Assembly Bill 341

The state legislature enacted AB 341 (California Public Resource Code Section 42649.2), amending the Integrated Waste Management Act to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle 2019).

3.2.5.3 Assembly Bill 1826

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

3.2.5.4 Senate Bill 1383

SB 1383 (Chapter 395, Statutes of 2016) establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. CalRecycle was granted the regulatory authority required to achieve the organic waste disposal

reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025 (CalRecycle 2019).

3.2.6 Water

3.2.6.1 Executive Order B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

3.2.6.2 Executive Order B-37-16

Issued May 2016, EO B-37-16 directed the State Water Resources Control Board (SWRCB) to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The SWRCB also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25 percent reduction called for in EO B-29-15. The SWRCB and Department of Water Resources were required to develop new, permanent water use targets that build upon the existing state law requirements that the state achieve a 20 percent reduction in urban water usage by 2020. EO B-37-16 also specifies that the SWRCB permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.

3.2.6.3 Executive Order N-10-21

In response to a state of emergency due to severe drought conditions, EO N-10-21 (July 2021) called on all Californians to voluntarily reduce their water use by 15 percent from their 2020 levels. Actions suggested in EO N-10-21 include reducing landscape irrigation, running dishwashers and washing machines only when full, finding and fixing leaks, installing water-efficient showerheads, taking shorter showers, using a shut-off nozzle on hoses, and taking cars to commercial car washes that use recycled water.

3.2.7 Other State Actions

3.2.7.1 Senate Bill 97

SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (Governor's Office of Planning and Research 2008). The advisory further

recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4(a)). The Guidelines require a lead agency to 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 GHG emissions (14 CCR 15064.4(b)). The Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance-based standards" (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

3.2.7.2 Executive Order S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009, and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: Agriculture, Biodiversity and Habitat, Emergency Management, Energy, Forestry, Ocean and Coastal Ecosystems and Resources, Public Health, Transportation, and Water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016. In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency.

3.3 REGIONAL GHG EMISSION POLICIES AND PLANS

3.3.1 SANDAG: San Diego Forward: The Regional Plan

The San Diego Association of Governments' (SANDAG's) RTP/SCS "San Diego Forward: The 2021 Regional Plan" (Regional Plan) is the long-range planning document developed to meet the

requirements of SB 375 and to address the region's housing, economic, transportation, environmental, and overall quality-of-life needs. The Regional Plan establishes a planning framework and implementation actions that increase the region's sustainability and encourage "smart growth while preserving natural resources and limiting urban sprawl." The Regional Plan encourages the regions and the County of San Diego (County) to increase residential and employment concentrations in areas with the best existing and future transit connections, and to preserve important open spaces. The focus is on the implementation of basic smart growth principles designed to strengthen the integration of land use and transportation (SANDAG 2021).

3.3.2 County of San Diego Construction and Demolition Recycling Ordinance

The County has a construction and demolition recycling ordinance that is designed to divert debris from construction and demolition projects away from landfill disposal in the unincorporated County of San Diego. The ordinance requires that 90 percent of inert materials and 70 percent of all other construction materials from a project be recycled. In order to comply with the ordinance, applicants must submit a Construction and Demolition Debris Management Plan and a fully refundable Performance Guarantee prior to building permit issuance.

3.3.3 County of San Diego Climate Action Plan

In February 2018, the County adopted a long-term programmatic climate action plan (CAP) that outlined the actions the County would undertake to achieve its proportional share of state GHG emission reductions to be compliant with AB 32 and EO S-3-05 (County 2018). The CAP was prepared to ensure that new developments incorporated more sustainable design standards and applicable GHG reduction measures (County 2018). Appendix A of the CAP included a project-level CAP Consistency Review Checklist (Checklist) that was to be used to demonstrate a project's consistency with the General Plan growth projections, land use assumptions, and applicable CAP measures. The purpose of the Checklist was to, in conjunction with the CAP, provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA.

In March 2018, multiple petitioners filed a lawsuit against the County seeking to set aside certain portions of the CAP and the supplemental environmental impact report (SEIR) on which the CAP was based. In December 2018, the San Diego County Superior Court issued a writ ordering the approval of the CAP and its SEIR to be set aside. In January 2019, the County appealed the San Diego County Superior Court's ruling, but in June 2020, the Fourth District Court of Appeal, Division One (Case No. D075478) upheld the trial Superior Court's ruling. However, the County revised and approved its Final Draft CAP on September 11, 2024.

4.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

4.1 METHODOLOGY

GHG emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1. 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 GHG emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and default input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices (CAPCOA 2022). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. CalEEMod output files for the project are included in Appendix A to this report.

4.1.1 Project Construction

Construction emissions were modeled using CalEEMod, as described above. Default data sources in CalEEMod for construction emissions include construction surveys, off-road equipment emissions factors from CARB's OFFROAD2017 emissions inventory, and on-road emissions factors for CARB's EMFAC2019 emissions inventory. The complete calculation methodology and sources of data used in CalEEMod can be found in the CalEEMod User's Guide, and Appendices C, D, F, and G to the User's Guide (CAPCOA 2022).

Construction emissions calculations were based on CalEEMod defaults, and the estimated construction activity durations provided by the project engineers. The emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of: (1) a more modern and cleaner-burning construction equipment fleet mix than assumed in CalEEMod; and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

4.1.1.1 Construction Activities

Project construction activities would include site preparation and clearing, grading, physical building construction, paving, and architectural coating. Project grading activities would include the export of 390 cubic yards of material and detailed contouring of the slope. The construction schedule assumed in the modeling is shown in Table 4, *Anticipated Construction Schedule*.

Table 4
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period Start	Construction Period End	Number of Working Days
Site Preparation	1/1/2026	1/14/2026	10
Grading	1/15/2026	4/15/2026	65
Building Construction	4/16/2026	6/15/2027	304
Paving	6/16/2027	7/13/2027	20
Architectural Coatings	7/14/2027	8/10/2027	20

Source: Project Engineer; CalEEMod.

4.1.1.2 Construction Off-Road Equipment

Construction would require the use of heavy off-road equipment. Construction equipment estimates are based on input from the project engineer and default values in CalEEMod. Table 5, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 5
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Equipment	Horsepower	Number	Hours/Day
Site Preparation			
Rubber Tired Dozer	367	3	8
Tractor/Loader/Backhoe	84	4	8
Grading/Excavation			
Excavators	36	2	8
Grader	148	1	8
Rubber Tired Dozer	367	1	8
Scraper	423	2	8
Tractor/Loader/Backhoe	84	2	8
Building Construction			
Cranes	367	1	7
Forklifts	82	3	8
Generator Set	14	1	8
Tractor/Loader/Backhoe	84	3	7
Welder	46	1	8
Paving			
Pavers	81	2	8
Paving Equipment	89	2	8
Rollers	36	2	8
Architectural Coating			
Air Compressors	37	1	6

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

4.1.1.3 Construction On-Road Trips

Worker commute trips and vendor delivery trips were modeled based on CalEEMod defaults. Worker trips are anticipated to vary between 2 and 20 trips per day, depending on construction activity. Worker trips used the default one-way trip distance of 11.97 miles. Vendor delivery trips would be 1 per day during building construction. Vendor trips used the default one-way trip distance of 7.63 miles.

Per the project engineer, approximately 390 cubic yards of soil (approximately 1 truckload per day) would be exported from the site during grading/excavation.

4.1.2 Project Operations

Operational emissions were modeled using CalEEMod, as described above.

4.1.2.1 Modeled Land Uses

Project land uses were modeled based on the project description and project plan provided by the project engineer/architect. Main land use will be "Outdoor Recreational Park" which was modeled within CalEEMod as City Park. Of the four buildings being proposed, Buildings A, C, and D were included in the City Park land use line item as 5,400 square feet of recreational building area. The 4,125-square foot Pavilion (Building B) was modeled as a fast-food restaurant without drive through. The model also analyzed the development of the 146-space parking lot.

4.1.2.2 Area Source Emissions

Area sources include emissions from landscaping equipment. CalEEMod default values for landscaping equipment were used.

4.1.2.3 Energy Emissions

Development within the project would use electricity for lighting, heating, and cooling. California 2022 Title 24 Part 6 building energy standards include a requirement for on-site solar electricity generation which could be applicable to the project. The minimum amount of solar electricity generated to meet the 2022 Tile 24 standards is based on climate zone, the building's conditioned floor area (the floor space that would include heating or air conditioning), and the available roof space. Because the amount of available roof space was unknown at the time of this analysis, to be conservative, no energy use reductions resulting from project solar panels were included in the modeling. The project energy use was modeled using CalEEMod defaults adjusted to account for an all-electric development. That is, the default energy assumed in CalEEMod to be consumed through the combustion of natural gas was converted to equal amounts of electric energy and added to the default CalEEMod assumed electric consumption.

4.1.2.4 Vehicular (Mobile) Sources

Operational emissions from mobile sources are associated with project-related vehicle trip generation and trip length. Project trip generation was estimated by CR Associates per the County of San Diego's Transportation Study Guidelines based on rates outlined in the Institute of Transportation Engineer's Trip Generation Manual, 11th Edition. It was estimated the project would generate 526 average daily trips with 29 morning peak trips and 55 afternoon peak trips (CR Associates 2023a). The CalEEMod default trip distances, purposes, and fleet mix were used.

4.1.2.5 Solid Waste Sources

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod determines the GHG emissions associated with the disposal of solid waste into landfills. Portions of these emissions are biogenic. CalEEMod methods for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. CalEEMod default solid waste generation rates were used.

4.1.2.6 Water Sources

Water-related GHG emissions are from the conveyance and treatment of water. CalEEMod uses the CEC's 2006 Refining Estimates of Water-Related Energy Use in California to establish default water-related emission factors. Modeling was conducted using these defaults.

4.2 SIGNIFICANCE CRITERIA

Given the relatively small levels of emissions generated by a typical project in relationship to the total amount of GHG emissions generated on a national or global basis, individual projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from individual projects could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

The determination of significance is governed by CEQA Guidelines 15064.4, entitled "Determining the Significance of Impacts from Greenhouse Gas Emissions." CEQA Guidelines 15064.4(a) states, "[t]he determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to … [use a quantitative model or qualitative model]" (emphasis added). In turn, CEQA Guidelines 15064.4(b) clarifies that a lead agency should consider "Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project." Therefore, consistent with CEQA Guidelines 15064.4, the GHG analysis for the project appropriately relies upon a threshold based on the exercise of careful judgement and is believed to be appropriate in the context of this particular project.

The analysis contained within this report was initiated prior to the County's approval of its revised Final Draft CAP. At the time the County did not have locally adopted screening criteria or GHG thresholds. Therefore, the determination of the significance of the project's GHG emissions are based on the land use development project level thresholds and guidance adopted by the Bay Area Air Quality Management District (BAAQMD) on April 20, 2022. BAAQMD's GHG emissions thresholds are largely reflexive of several of the CAP's overarching goals, including building decarbonization and the electrification of the on-road vehicle fleet, and are based on the approach endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal.4th 204), which evaluates a project based on its effect on California's efforts to meet the State's long term climate goals. As the Supreme Court held in that case, a project that would be consistent with meeting those goals can be found to have a less-than-significant impact on climate change under CEQA. If a project

would contribute its "fair share" of what will be required to achieve those long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change (62 Cal.4th 220–223). Applying this approach, BAAQMD has analyzed what will be required of new land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045. BAAQMD has found, based on this analysis, that a new land use development project being built today needs to incorporate the following design elements to do its "fair share" of implementing the goal of carbon neutrality by 2045 (BAAQMD 2022):

> Projects must include, at a minimum, the following project design elements:
>
> 1. Buildings
>
>   a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
>
>   b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
>
> 2. Transportation
>
>   a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
>
>   i. Residential projects: 15 percent below the existing VMT per capita
>
>   ii. Office projects: 15 percent below the existing VMT per employee
>
>   iii. Retail projects: no net increase in existing VMT.
>
>   b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

Justification for the use of these thresholds to determine significance under CEQA is contained in the Justification Report – CEQA Thresholds for Evaluating the Significance of Climate Impacts (BAAQMD 2022).

5.0 PROJECT IMPACT ANALYSIS

5.1 GREENHOUSE GAS EMISSIONS

The project would generate GHG emissions during construction and operation. CEQA Guidelines Section 15064.4(a) states that a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Therefore, GHG emissions are estimated using the methods described in Section 4.1, above, and are provided below for informational purposes.

5.1.1 Construction Emissions Inventories

GHG emissions would be associated with the construction phases of the project through use of off-road heavy equipment, haul trucks, and vehicle trips from construction worker commutes. Emissions of GHGs related to the construction of the project would be temporary and would occur within an approximately 20-month period. As discussed in Section 1.3, the project would incorporate construction BMPs to reduce project-related GHG emissions consistent with BAAQMD recommendations. These BMPs were not included in the project's construction emissions calculations; thus, the implementation of the BMPs would further reduce emissions resulting from project construction activity. As shown in Table 6, *Construction GHG Emissions*, total GHG emissions associated with construction of the project are estimated at 580 MT CO_2e.

Table 6
CONSTRUCTION GHG EMISSIONS

Phase	Emissions (MT CO_2e)
Site Preparation	25
Grading	202
Building Construction	337
Paving	15
Architectural Coating	1
Total	**580**

Source: CalEEMod (output data is provided in Appendix A)
Note: Values rounded to the nearest whole number.
MT = metric tons; CO_2e = carbon dioxide equivalent

5.1.2 Operational Emissions Inventories

Operational sources of GHG emissions include: (1) energy use; (2) area sources (landscaping equipment and consumer products); (3) vehicle use; (4) solid waste generation; (5) water conveyance and treatment; and (6) refrigerant leaks. The project's calculated GHG emissions inventory is shown in Table 7, *Operational GHG Emissions*. The complete modeling output is included in Appendix A to this report.

Table 7
OPERATIONAL GHG EMISSIONS

Emission Sources	Emissions ($MT CO_2e$)
Mobile	701
Area	<0.5
Energy	7
Water/Wastewater	2
Solid Waste	15
Refrigerant Leaks	1
Total Operational Emissions[1]	**727**

Source: CalEEMod, output data is provided in Appendix A.
MT = metric ton; CO_2e = carbon dioxide equivalent
[1] Total may not sum due to rounding.

5.1.3 Project GHG Emissions Impact

To have less than significant GHG emissions, BAAQMD's GHG thresholds require all land-use development projects to implement GHG reduction design elements discussed in Section 4.2:

1. Buildings

    a. Natural Gas: The project would be all electric (i.e., designed without natural gas plumbing or natural gas appliances).

    b. Energy Use: The project would comply with the most current California Title 24, Part 6 Building Energy Efficiency Standards, and Title 24 Part 11, CALGreen. The Title 24, Part 6 Building Energy Efficiency Standards include the requirement for the project to install an on-site photovoltaic electricity generation system (e.g., solar panels) and the requirement to install a battery energy storage system. In addition, as discussed below, the project would result in a reduction in regional VMT-related transportation energy use. Therefore, the project would not result in wasteful, inefficient, or unnecessary energy usage.

2. Transportation

    a. VMT: Per the analysis prepared by the project's traffic engineer, CR Associates, the project is anticipated to shorten trips made by San Diego County residents associated with skiing by largely internalizing these trips within San Diego County. In other words, the project would shorten and reduce VMT by providing a ski facility within San Diego County and shortening the typical trips to farther, larger ski parks. Therefore, the project would have a less than significant CEQA transportation VMT impact (CR Associates 2023b).

    b. Electric Vehicle Parking: A minimum of 19 of the project's 146 parking spaces would include electric vehicle supply equipment (EVSE) in accordance with the 2022 CALGreen nonresidential Tier 2 measure A5.106.5.3.2.[1]

[1] CALGreen Tier 1 and Tier 2 measures are voluntary measures contained in the Tile 24 Part 11 appendices which go beyond the minimum code requirements. Although not required by the State, Tier 1 and Tier 2 measures can be mandated by local agencies (e.g., City, County).

5.1.4 Significance of Impacts

The project would be required to install solar panels and a battery energy storage system in accordance with Title 24 Building Energy Efficiency Standards, resulting in lower project energy demand from the State's electrical grid. In addition, the project would result in a reduction of regional VMT-related transportation energy use. Therefore, the project would not result in wasteful, inefficient, or unnecessary energy usage, meeting the requirement of the BAAQMD GHG reduction design elements 1.b. and 2.a. Additionally, the project has been designed to be all-electric and meet CALGreen Tier 2 EV parking voluntary measures by providing a minimum of 19 of the project's 146 parking spaces with EVSE in accordance with the BAAQMD GHG reduction design elements 1.a. and 2.b. As such, the impact would be less than significant.

5.1.5 Mitigation Measures

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

5.1.6 Significance after Mitigation

The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The impact would be less than significant.

5.2 CONFLICT WITH GHG REDUCTION PLANS

The project was analyzed for conflicts with the General Plan land use growth projections; the General Plan goals and policies applicable to the project that affect regional GHG emissions; the Regional Plan; and the CARB Scoping Plan.

5.2.1 Impact Analysis

5.2.1.1 General Plan Land Use

The project site is currently zoned as A70, Limited Agriculture, and has a General Plan land use designation of Semi-Rural Residential. The project's proposed outdoor recreation park is an allowed use under the current zoning and would not require a rezone or a General Plan amendment to change the land use designation. However, the project is requesting the approval of a major use permit and, therefore, may result in a more intense development than was assumed in regional plans. The project is not a large employment center that would create a substantial number of jobs, nor does it include any residential uses; therefore, the project would not substantially increase population beyond SANDAG's growth forecasts. Therefore, the project would be consistent with the General Plan growth projections used in the development of the Regional Plan and in the development of GHG emissions inventories and projections used in the 2022 Scoping Plan.

5.2.1.2 Regional Plan and 2022 Scoping Plan

As described in Section 5.1, the project would shorten vehicle trips and reduce VMT (CR Associates 2023b). A reduction in regional VMT (and VMT-related GHG emissions) is a primary objective of the Regional Plan as the San Diego County RTP/SCS in accordance with the mandates of SB 375. Implementation of the RTP/SCS plans in the state's metropolitan areas to reduce VMT is a key

component of the mobile source GHG emissions reduction policies and control measures in the CARB 2022 Scoping Plan. In addition, as discussed above, the project would be consistent with the General Plan growth projections used in the development of the Regional Plan and in the development of GHG emissions inventories and projections used in the CARB 2022 Scoping Plan.

As discussed in Sections 4.2 and 5.1, by implementing all-electric design and supplying EV charging infrastructure beyond minimum requirements, the project would contribute its "fair share" towards achieving California's post-2020 GHG reduction goals and zero carbon goals outlined in the CARB 2022 Scoping Plan. BAAQMD's performance standard based GHG thresholds (described in Section 4.2) are consistent with the priority areas and related actions outlined in CARB's 2022 Scoping Plan Appendix D, *Local Actions*. Per the 2022 Scoping Plan Appendix D, local jurisdictions should focus on these three priority areas: transportation electrification, VMT reduction, and building decarbonization (CARB 2022a). By implementing the project design features required by the BAAQMD thresholds (no natural gas, no wasteful or inefficient use of energy, no net increase in VMT for retail buildings, and install EV charging infrastructure per CALGreen Tier 2), the project would be consistent with the 2022 Scoping Plan Appendix D guidance. The impact would be less than significant.

5.2.2 Significance of Impacts

The impact would be less than significant.

5.2.3 Mitigation Measures

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

5.2.4 Significance after Mitigation

The project would not conflict with or obstruct the implementation of applicable plans and regulations adopted for the purpose of reducing the emissions of GHGs. The impact would be less than significant.

6.0 CUMULATIVE IMPACT ANALYSIS

Given the relatively small levels of emissions generated by a typical project in relationship to the total amount of GHG emissions generated on a national or global basis, individual projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from individual projects could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts. As described in Section 5.1, the project's GHG emissions would be less than significant. Therefore, the project's GHG emissions impacts would be less than cumulatively considerable.

7.0 LIST OF PREPARERS

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Appendix A

CalEEMod Output

Karve Ski Park Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Karve Ski Park
Construction Start Date	1/1/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	20.8
Location	26351 N Centre City Pkwy, Escondido, CA 92026, USA
County	San Diego
City	Unincorporated
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6280
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.20

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	9.13	Acre	9.13	0.00	67,688	67,688	—	—
Fast Food Restaurant w/o Drive Thru	4.13	1000sqft	0.00	4,125	0.00	—	—	—
Parking Lot	147	Space	1.32	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	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.	3.71	3.12	27.3	28.5	0.06	1.12	3.77	4.89	1.03	1.47	2.50	—	6,837	6,837	0.28	0.07	0.76	6,866
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.81	3.21	29.2	29.5	0.06	1.24	7.81	9.06	1.14	3.97	5.12	—	6,827	6,827	0.28	0.07	0.02	6,855
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.42	1.19	10.7	12.5	0.02	0.43	0.89	1.32	0.39	0.37	0.77	—	2,601	2,601	0.11	0.03	0.09	2,612
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	0.22	1.95	2.28	< 0.005	0.08	0.16	0.24	0.07	0.07	0.14	—	431	431	0.02	< 0.005	0.01	432

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																		
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.71	3.12	27.3	28.5	0.06	1.12	3.77	4.89	1.03	1.47	2.50	—	6,837	6,837	0.28	0.07	0.76	6,866
2027	1.24	3.12	9.42	13.0	0.02	0.34	0.13	0.42	0.31	0.03	0.31	—	2,429	2,429	0.10	0.02	0.44	2,438
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.81	3.21	29.2	29.5	0.06	1.24	7.81	9.06	1.14	3.97	5.12	—	6,827	6,827	0.28	0.07	0.02	6,855
2027	1.24	1.04	9.42	13.0	0.02	0.34	0.02	0.36	0.31	< 0.005	0.31	—	2,428	2,428	0.10	0.02	< 0.005	2,437
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.42	1.19	10.7	12.5	0.02	0.43	0.89	1.32	0.39	0.37	0.77	—	2,601	2,601	0.11	0.03	0.09	2,612
2027	0.46	0.56	3.49	4.86	0.01	0.13	0.01	0.14	0.12	< 0.005	0.12	—	886	886	0.04	0.01	0.02	890
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.26	0.22	1.95	2.28	< 0.005	0.08	0.16	0.24	0.07	0.07	0.14	—	431	431	0.02	< 0.005	0.01	432
2027	0.08	0.10	0.64	0.89	< 0.005	0.02	< 0.005	0.03	0.02	< 0.005	0.02	—	147	147	0.01	< 0.005	< 0.005	147

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	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.28	2.34	1.50	16.7	0.04	0.03	3.87	3.90	0.03	0.98	1.01	28.4	4,387	4,415	3.06	0.17	18.4	4,560
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.21	2.27	1.64	15.4	0.04	0.03	3.87	3.90	0.03	0.98	1.01	28.4	4,192	4,221	3.07	0.18	6.76	4,357

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.20	2.26	1.62	15.5	0.04	0.03	3.82	3.85	0.03	0.97	1.00	28.4	4,222	4,250	3.07	0.17	11.6	4,391
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.40	0.41	0.30	2.83	0.01	0.01	0.70	0.70	0.01	0.18	0.18	4.71	699	704	0.51	0.03	1.92	727

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																		
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.25	2.04	1.50	16.5	0.04	0.03	3.87	3.90	0.03	0.98	1.01	—	4,342	4,342	0.18	0.16	12.0	4,405
Area	0.03	0.29	< 0.005	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.74	0.74	< 0.005	< 0.005	—	0.74
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	41.2	41.2	0.03	< 0.005	—	43.0
Water	—	—	—	—	—	—	—	—	—	—	—	2.40	2.53	4.93	0.25	0.01	—	12.9
Waste	—	—	—	—	—	—	—	—	—	—	—	26.0	0.00	26.0	2.60	0.00	—	91.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.45	6.45
Total	2.28	2.34	1.50	16.7	0.04	0.03	3.87	3.90	0.03	0.98	1.01	28.4	4,387	4,415	3.06	0.17	18.4	4,560
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.21	2.01	1.64	15.4	0.04	0.03	3.87	3.90	0.03	0.98	1.01	—	4,149	4,149	0.19	0.17	0.31	4,203
Area	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	41.2	41.2	0.03	< 0.005	—	43.0
Water	—	—	—	—	—	—	—	—	—	—	—	2.40	2.53	4.93	0.25	0.01	—	12.9
Waste	—	—	—	—	—	—	—	—	—	—	—	26.0	0.00	26.0	2.60	0.00	—	91.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.45	6.45

Total	2.21	2.27	1.64	15.4	0.04	0.03	3.87	3.90	0.03	0.98	1.01	28.4	4,192	4,221	3.07	0.18	6.76	4,357
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.19	1.98	1.62	15.4	0.04	0.03	3.82	3.85	0.03	0.97	1.00	—	4,178	4,178	0.19	0.16	5.17	4,237
Area	0.02	0.28	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.36	0.36	< 0.005	< 0.005	—	0.37
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	41.2	41.2	0.03	< 0.005	—	43.0
Water	—	—	—	—	—	—	—	—	—	—	—	2.40	2.53	4.93	0.25	0.01	—	12.9
Waste	—	—	—	—	—	—	—	—	—	—	—	26.0	0.00	26.0	2.60	0.00	—	91.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.45	6.45
Total	2.20	2.26	1.62	15.5	0.04	0.03	3.82	3.85	0.03	0.97	1.00	28.4	4,222	4,250	3.07	0.17	11.6	4,391
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.40	0.36	0.30	2.81	0.01	0.01	0.70	0.70	0.01	0.18	0.18	—	692	692	0.03	0.03	0.86	701
Area	< 0.005	0.05	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.06
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	6.82	6.82	< 0.005	< 0.005	—	7.12
Water	—	—	—	—	—	—	—	—	—	—	—	0.40	0.42	0.82	0.04	< 0.005	—	2.14
Waste	—	—	—	—	—	—	—	—	—	—	—	4.31	0.00	4.31	0.43	0.00	—	15.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.07	1.07
Total	0.40	0.41	0.30	2.83	0.01	0.01	0.70	0.70	0.01	0.18	0.18	4.71	699	704	0.51	0.03	1.92	727

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

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

Location	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	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.80	0.79	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.67	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	154	154	0.01	0.01	0.01	156
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.25	4.25	< 0.005	< 0.005	0.01	4.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.70	0.70	< 0.005	< 0.005	< 0.005	0.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
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	0.65	0.54	4.85	4.91	0.01	0.20	—	0.20	0.18	—	0.18	—	1,175	1,175	0.05	0.01	—	1,179
Dust From Material Movement	—	—	—	—	—	—	0.64	0.64	—	0.25	0.25	—	—	—	—	—	—	—
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	0.12	0.10	0.88	0.90	< 0.005	0.04	—	0.04	0.03	—	0.03	—	195	195	0.01	< 0.005	—	195
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.86	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	186	186	0.01	0.01	0.65	189

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	53.0	53.0	< 0.005	0.01	0.11	55.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	176	176	0.01	0.01	0.02	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	53.0	53.0	< 0.005	0.01	< 0.005	55.7
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	—	31.5	31.5	< 0.005	< 0.005	0.05	32.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.44	9.44	< 0.005	< 0.005	0.01	9.92
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.22	5.22	< 0.005	< 0.005	0.01	5.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	1.64

3.5. Building Construction (2026) - Unmitigated

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

Location	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	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
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	0.65	0.54	5.01	6.60	0.01	0.19	—	0.19	0.18	—	0.18	—	1,220	1,220	0.05	0.01	—	1,224
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	0.12	0.10	0.92	1.20	< 0.005	0.04	—	0.04	0.03	—	0.03	—	202	202	0.01	< 0.005	—	203
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	16.1	16.1	< 0.005	< 0.005	0.06	16.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.6	16.6	< 0.005	< 0.005	0.04	17.4
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	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	< 0.005	15.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.6	16.6	< 0.005	< 0.005	< 0.005	17.3
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.81	7.81	< 0.005	< 0.005	0.01	7.92
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.45	8.45	< 0.005	< 0.005	0.01	8.83
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	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.31
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.40	1.40	< 0.005	< 0.005	< 0.005	1.46
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 (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
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	0.40	0.33	3.05	4.20	0.01	0.11	—	0.11	0.10	—	0.10	—	779	779	0.03	0.01	—	781

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	0.07	0.06	0.56	0.77	< 0.005	0.02	—	0.02	0.02	—	0.02	—	129	129	0.01	< 0.005	—	129
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.8	15.8	< 0.005	< 0.005	0.05	16.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.04	17.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	< 0.005	15.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	< 0.005	17.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.90	4.90	< 0.005	< 0.005	0.01	4.97
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.28	5.28	< 0.005	< 0.005	0.01	5.51
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.81	0.81	< 0.005	< 0.005	< 0.005	0.82
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.87	0.87	< 0.005	< 0.005	< 0.005	0.91
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.06	0.05	0.04	0.61	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	137	137	0.01	< 0.005	0.44	139
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.16	7.16	< 0.005	< 0.005	0.01	7.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.18	1.18	< 0.005	< 0.005	< 0.005	1.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	3.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.17	3.17	< 0.005	< 0.005	0.01	3.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.17

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	2.25	2.04	1.50	16.5	0.04	0.03	3.87	3.90	0.03	0.98	1.01	—	4,342	4,342	0.18	0.16	12.0	4,405
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.25	2.04	1.50	16.5	0.04	0.03	3.87	3.90	0.03	0.98	1.01	—	4,342	4,342	0.18	0.16	12.0	4,405
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	2.21	2.01	1.64	15.4	0.04	0.03	3.87	3.90	0.03	0.98	1.01	—	4,149	4,149	0.19	0.17	0.31	4,203

Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.21	2.01	1.64	15.4	0.04	0.03	3.87	3.90	0.03	0.98	1.01	—	4,149	4,149	0.19	0.17	0.31	4,203
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.40	0.36	0.30	2.81	0.01	0.01	0.70	0.70	0.01	0.18	0.18	—	692	692	0.03	0.03	0.86	701
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.40	0.36	0.30	2.81	0.01	0.01	0.70	0.70	0.01	0.18	0.18	—	692	692	0.03	0.03	0.86	701

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	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	34.9	34.9	0.03	< 0.005	—	36.5

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	6.24	6.24	< 0.005	< 0.005	—	6.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	41.2	41.2	0.03	< 0.005	—	43.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	34.9	34.9	0.03	< 0.005	—	36.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	6.24	6.24	< 0.005	< 0.005	—	6.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	41.2	41.2	0.03	< 0.005	—	43.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	5.79	5.79	< 0.005	< 0.005	—	6.04
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1.03	1.03	< 0.005	< 0.005	—	1.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	6.82	6.82	< 0.005	< 0.005	—	7.12

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																		
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
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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

4.3.1. Unmitigated

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

Source																		
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.03	< 0.005	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.74	0.74	< 0.005	< 0.005	—	0.74
Total	0.03	0.29	< 0.005	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.74	0.74	< 0.005	< 0.005	—	0.74
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.06
Total	< 0.005	0.05	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.06

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	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	1.47	1.47	< 0.005	< 0.005	—	1.54
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	2.40	1.05	3.45	0.25	0.01	—	11.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.40	2.53	4.93	0.25	0.01	—	12.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	1.47	1.47	< 0.005	< 0.005	—	1.54
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	2.40	1.05	3.45	0.25	0.01	—	11.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	2.40	2.53	4.93	0.25	0.01	—	12.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.24	0.24	< 0.005	< 0.005	—	0.25
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	0.40	0.17	0.57	0.04	< 0.005	—	1.89
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.40	0.42	0.82	0.04	< 0.005	—	2.14

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.42	0.00	0.42	0.04	0.00	—	1.48
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	25.6	0.00	25.6	2.56	0.00	—	89.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.0	0.00	26.0	2.60	0.00	—	91.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

City Park	—	—	—	—	—	—	—	—	—	—	—	0.42	0.00	0.42	0.04	0.00	—	1.48
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	25.6	0.00	25.6	2.56	0.00	—	89.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.0	0.00	26.0	2.60	0.00	—	91.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	4.24	0.00	4.24	0.42	0.00	—	14.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.31	0.00	4.31	0.43	0.00	—	15.1

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	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.45	6.45
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.45	6.45
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.45	6.45
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.45	6.45
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.07	1.07
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.07	1.07

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description

Site Preparation	Site Preparation	1/1/2026	1/14/2026	5.00	10.0	—
Grading	Grading	1/15/2026	4/15/2026	5.00	65.0	—
Building Construction	Building Construction	4/16/2026	6/15/2027	5.00	304	—
Paving	Paving	6/16/2027	7/13/2027	5.00	20.0	—
Architectural Coating	Architectural Coating	7/14/2027	8/10/2027	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	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	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.75	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1.73	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	0.68	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	0.35	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	14,288	4,763	3,458

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—
Grading	—	390	195	0.00	—
Paving	0.00	0.00	0.00	0.00	1.32

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
City Park	0.00	0%
Fast Food Restaurant w/o Drive Thru	0.00	0%
Parking Lot	1.32	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	45.1	0.03	< 0.005
2027	0.00	45.1	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
City Park	526	526	526	191,990	5,484	5,484	5,484	2,001,795
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	14,288	4,763	3,458

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
City Park	0.00	45.1	0.0330	0.0040	0.00
Fast Food Restaurant w/o Drive Thru	282,833	45.1	0.0330	0.0040	0.00
Parking Lot	50,484	45.1	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
City Park	0.00	2,247,868
Fast Food Restaurant w/o Drive Thru	1,252,077	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
City Park	0.78	—
Fast Food Restaurant w/o Drive Thru	47.5	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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
Fast Food Restaurant w/o Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant w/o Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant w/o Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	16.6	annual days of extreme heat
Extreme Precipitation	5.75	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	29.8	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	58.3
AQ-PM	10.1
AQ-DPM	13.5
Drinking Water	49.7
Lead Risk Housing	14.7
Pesticides	63.0
Toxic Releases	10.5
Traffic	46.4
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	52.0
Haz Waste Facilities/Generators	37.7
Impaired Water Bodies	90.1
Solid Waste	52.9
Sensitive Population	—
Asthma	20.7
Cardio-vascular	36.0
Low Birth Weights	35.0
Socioeconomic Factor Indicators	—
Education	36.9
Housing	11.6
Linguistic	42.1
Poverty	21.3

Unemployment	39.2

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	72.60361863
Employed	25.29192865
Median HI	71.97484922
Education	—
Bachelor's or higher	59.70742974
High school enrollment	10.76607212
Preschool enrollment	76.37623508
Transportation	—
Auto Access	87.47593995
Active commuting	9.778005903
Social	—
2-parent households	71.76953676
Voting	81.99666367
Neighborhood	—
Alcohol availability	88.41267804
Park access	29.93712306
Retail density	10.6249198
Supermarket access	15.55241884
Tree canopy	61.70922623
Housing	—
Homeownership	84.70422174

Housing habitability	86.97549083
Low-inc homeowner severe housing cost burden	75.54215321
Low-inc renter severe housing cost burden	77.31297318
Uncrowded housing	90.74810728
Health Outcomes	—
Insured adults	57.69280123
Arthritis	43.8
Asthma ER Admissions	82.5
High Blood Pressure	75.3
Cancer (excluding skin)	34.5
Asthma	61.7
Coronary Heart Disease	63.8
Chronic Obstructive Pulmonary Disease	53.7
Diagnosed Diabetes	67.4
Life Expectancy at Birth	55.4
Cognitively Disabled	39.7
Physically Disabled	78.7
Heart Attack ER Admissions	74.3
Mental Health Not Good	58.7
Chronic Kidney Disease	73.0
Obesity	64.9
Pedestrian Injuries	39.4
Physical Health Not Good	66.1
Stroke	70.4
Health Risk Behaviors	—
Binge Drinking	18.0
Current Smoker	60.5

No Leisure Time for Physical Activity	64.0
Climate Change Exposures	—
Wildfire Risk	59.0
SLR Inundation Area	0.0
Children	71.1
Elderly	42.0
English Speaking	62.5
Foreign-born	25.1
Outdoor Workers	51.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	90.5
Traffic Density	52.8
Traffic Access	23.0
Other Indices	—
Hardship	37.3
Other Decision Support	—
2016 Voting	82.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	24.0
Healthy Places Index Score for Project Location (b)	62.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	10.45 acre Project site. 67,688 sqft of landscaped area per landscape plan. 5,400 sqft of supporting buildings (Bldg A, C, and D) 4,125 sqft pavilion to include food/bar with indoor and outdoor seating (Bldg B) modeled as restaurant. 147 space parking lot
Construction: Construction Phases	CalEEMod defaults adjusted based on input from CCI
Operations: Vehicle Data	CR Associates - Scoping Agreement for Transportation Studies
Operations: Energy Use	All electric development. kBTU of NG converted into equal kWh of electricity and added to default electricity for Restaurant Use