



ATTACHMENT D

ENVIRONMENTAL IMPACT REPORT

APPENDIX H

GREENHOUSE GAS ASSESSMENT

GREENHOUSE GAS ASSESSMENT

Capalina Apartments Residential Development

GPA22-0003

R22-0003

SDP22-0007

City of San Marcos, CA

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LIST OF COMMON ACRONYMS

Assembly Bill 32 (AB32)

Business as Usual (BAU)

California Air Pollution Control Officers Association's (CAPCOA)

California Air Resource Board (CARB)

California Environmental Quality Act (CEQA)

Carbon Dioxide (CO₂)

Climate Action Plan (CAP)

Cubic Yards (CY)

Environmental Protection Agency (EPA)

Electric Vehicle (EV)

Green House Gas (GHG)

International Residential Code (IRC)

Low Carbon Fuel Standard (LCFS)

Methane (CH₄)

Metric Tons of Carbon Dioxide Equivalent (MT CO₂e)

Nitrous Oxide (N₂O)

San Diego Air Basin (SDAB)

San Diego Air Pollution Control District (SDAPCD)

Senate Bill 97 (SB97)

Vehicle Miles Traveled (VMT)

1.0 INTRODUCTION

1.1 Project Description

The project proposes up to 119 multi-family residential units within two four-story buildings situated on approximately 2.51 gross acres. The project would also include 4,000 Square Foot (SF) retail use. Additionally, the Project proposes as many as 147 outdoor parking spaces of which 8 will be equipped with Electric Vehicle (EV) chargers and 15 will be EV capable. The project would be designed without hearth options within any of the proposed multi-family units.

The General Plan Land Use designation for the site is Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum floor area ratio (FAR) of 1.50. A constructable concept plan for the existing site was prepared calling for the construction of a multi-story office building consisting of 90,000 square feet (SF) of office use, 10,000 SF of retail use and 400 parking spaces. Parking would require both a parking garage and at ground level outside for this scenario. The total area including the parking would have a total gross floor area of 158,000 SF and would have a Floor Area Ratio (FAR) of 1.5.

Construction of the proposed project and the MU3 General Plan zoning designation (GP Buildout Scenario) would be expected to occur over a 10 to 11-month fast passed duration and are assumed to be the same for each scenario which is conservative. Grading for the project will consist of approximately 4,030 cubic yards (CY) of cut material and 12,270 CY of fill material requiring an import of approximately 8,240 CY of fill material. The MU3 scenario is anticipated to be the same.

The proposed Project development plan as well as an existing site concept consistent with the MU3 General Plan Buildout Scenario is provided in Figures 1-A and 1-B respectively.

1.2 Project Location

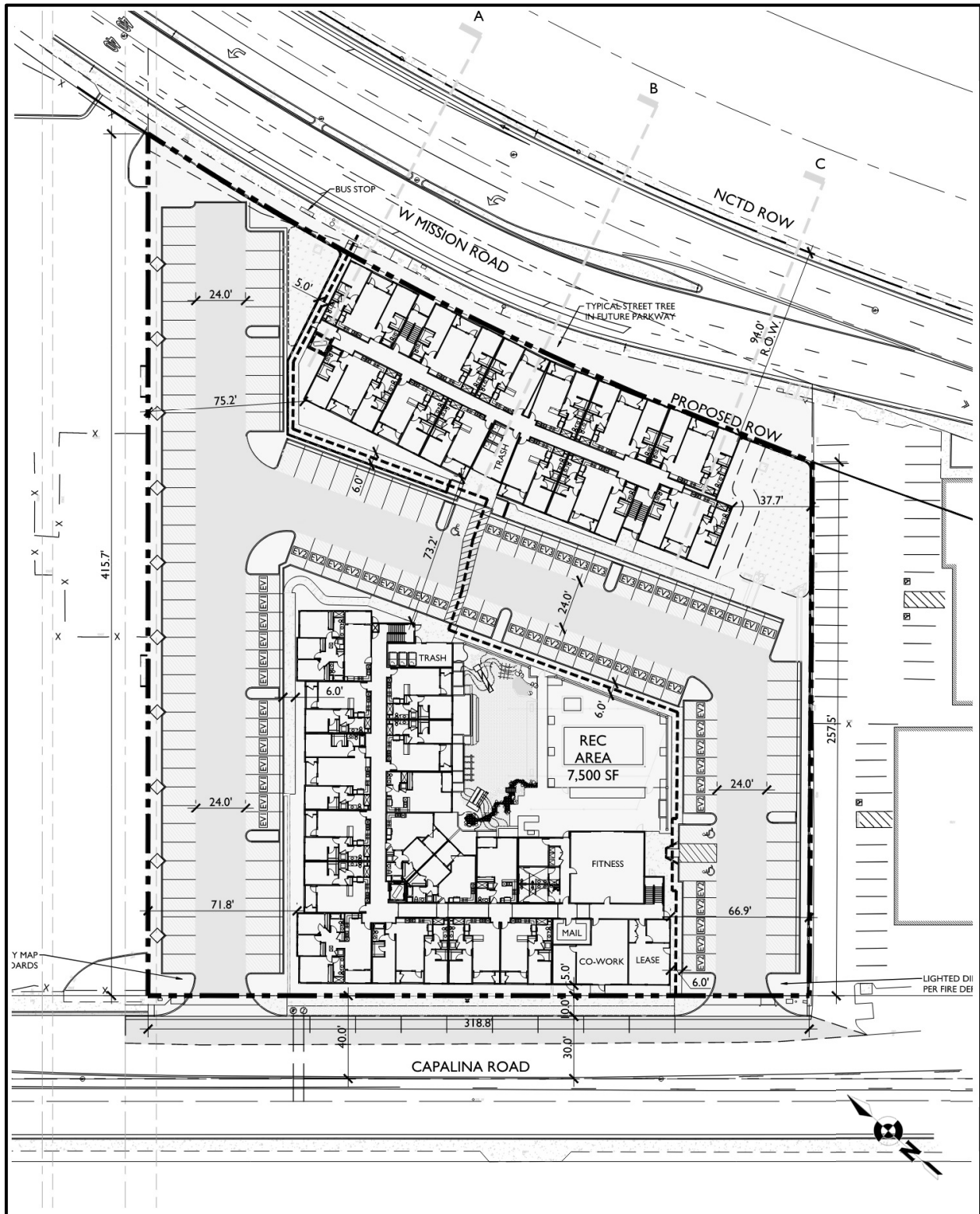
The vacant 2.51 acre project site having an Assessor Parcel Number (APN) of 219-115-3300 is located along Capalina Road in the Business/Industrial Community in the City of San Marcos. Specifically, the project site is located north of State Route 78 (SR-78) and east of Rancho Santa Fe Road between Mission Road and Capalina Road. The project is bounded by existing commercial and retail uses on the east and west, by Mission Road to the north, and by Capalina Road to the south. A project vicinity map is shown in Figure 1-C. The nearest residential use is the mobile home park located south across Capalina Road.

1.3 Purpose of this Report

The purpose of this Greenhouse Gas (GHG) Assessment is to analyze the project's GHG emissions and evaluate its conformance with the City of San Marcos' Climate Action Plan (CAP). As described in the City's CAP, there is an existing framework of federal, State, regional, and local policies and regulations that identify GHG reduction requirements within the State. The CAP provides a plan for the City to meet these requirements and achieve local reduction requirements outlined in the CAP. In addition, as identified in the CAP, showing consistency with the CAP would also demonstrate that the proposed Project would have a less than significant impact under the California Environmental Quality Act (CEQA) (City of San Marcos, 2020).

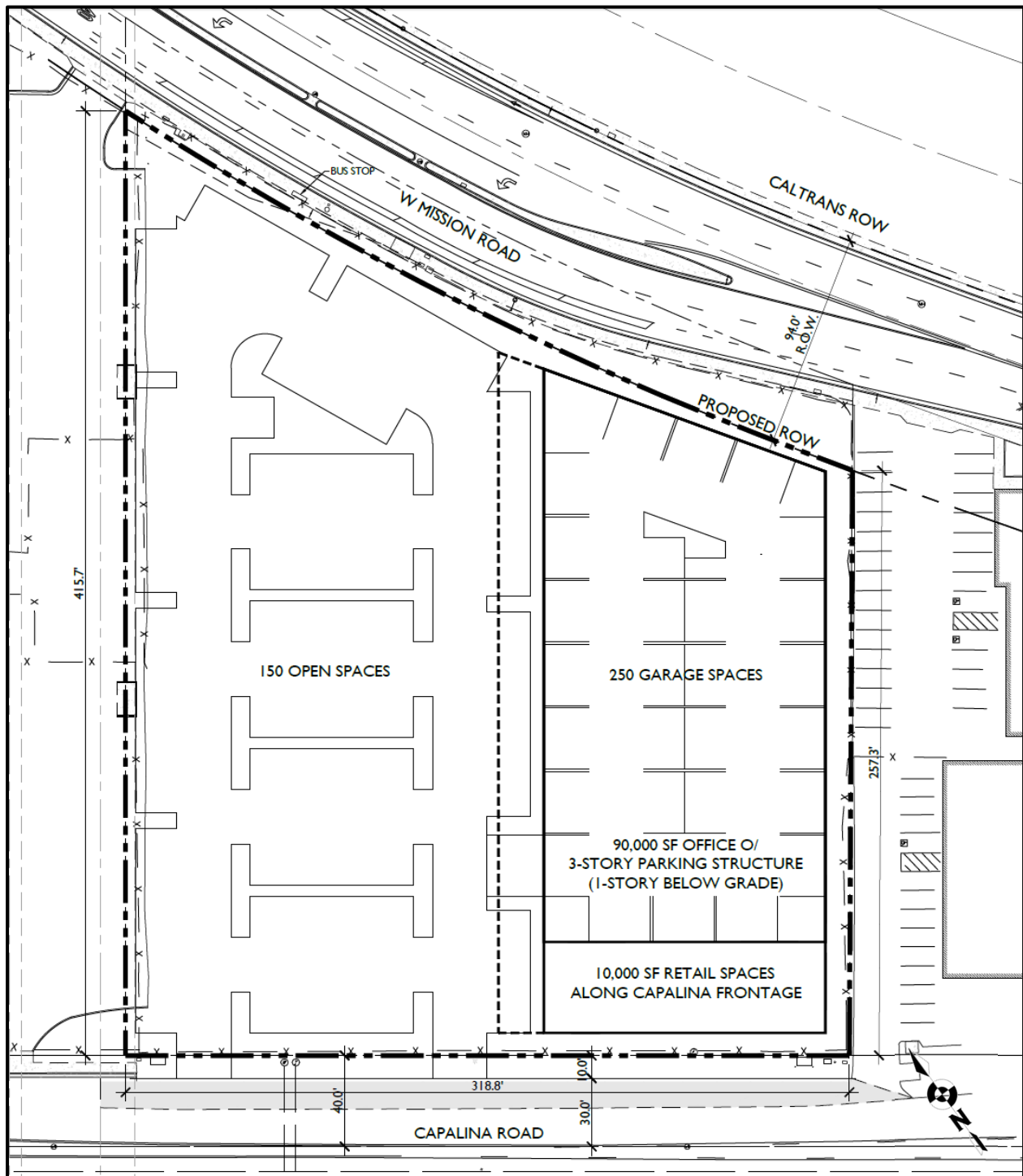
This analysis has been completed in order to compare GHG emissions from both the proposed Project and the MU3 General Plan Buildout Scenario.

Figure 1-A: Proposed Project Site Development Plan



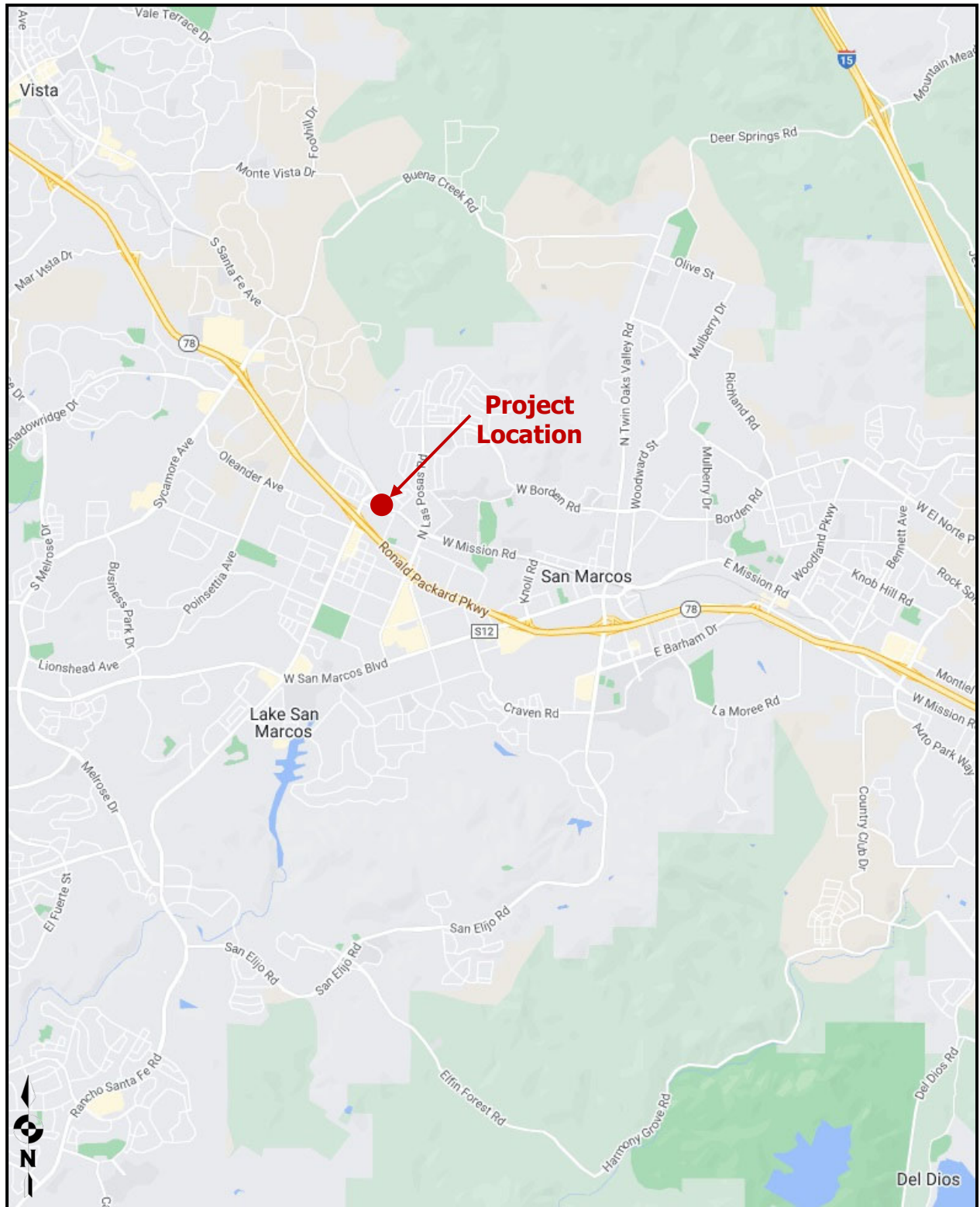
Source: (Summa Architecture, 2023)

Figure 1-B: MU3 General Plan Buildout Scenario Site Development Plan



Source: (Summa Architecture, 2023)

Figure 1-C: Project Vicinity Map



Source: (Google, 2023)

2.0 BACKGROUND AND ENVIRONMENTAL SETTING

2.1 Understanding Climate Change and Greenhouse Gases

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in the Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere. The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows:

Short-wave radiation emitted by the Sun is absorbed by the Earth. The Earth emits a portion of this energy in the form of long-wave radiation and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth.

The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

Some greenhouse gases are emitted exclusively from human activities (e.g., synthetic halocarbons). Others occur naturally but are found at elevated levels due to human inputs (e.g., carbon dioxide). Anthropogenic sources result from energy-related activities (e.g., combustion of fossil fuels in the electric utility and transportation sectors), agriculture, land-use change, waste management and treatment activities, and various industrial processes. Major greenhouse gases include carbon dioxide, methane, nitrous oxide, and various synthetic chemicals (EPA, 2023).

The GHGs typically analyzed in a greenhouse gas study are Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O) because they are emitted in the greatest quantities from human activities. A brief description of each GHG follows:

Carbon Dioxide (CO₂) is widely reported as the most important anthropogenic greenhouse gas because it currently accounts for the greatest portion of the warming associated with human activities. Carbon dioxide occurs naturally as part of the global carbon cycle, but human activities have increased atmospheric loadings through combustion of fossil fuels and

other emissions sources. Natural sinks that remove carbon dioxide from the atmosphere (e.g., oceans, plants) help regulate carbon dioxide concentrations, but human activities can disturb these processes (e.g., deforestation) or enhance them (EPA, 2023).

Methane comes from many sources, including human activities such as coal mining, natural gas production and distribution, waste decomposition in landfills, and digestive processes in livestock and agriculture. Natural sources of methane include wetlands and termite mounds (EPA, 2023).

Nitrous Oxide is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels (EPA, 2023).

To simplify greenhouse gas calculations, both CH₄ and N₂O are converted to an equivalent amount of carbon dioxide, or CO₂e. CO₂e is calculated by multiplying the calculated levels of CH₄ and N₂O by a Global Warming Potential (GWP). GWPs for both CH₄ and N₂ are presented within the 2007 Intergovernmental Panel on Climate Change (IPCC) report as being 25 and 298, respectively (IPCC, 2007).

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning. The City of San Marcos is within the SDAB so the same generalizations are true for the City.

Meteorological trends within the area generally show daytime highs ranging between 64°F in the winter to approximately 88°F in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 37°F in the winter to approximately 59°F in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2021). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018). The existing site aerial map is shown in Figure 2-A.

Figure 2-A: Existing Site Layout



Source: (Google Earth Pro, 2023)

3.0 CLIMATE CHANGE REGULATORY ENVIRONMENT

3.1 State

State Greenhouse Gas Targets

Executive Order S-3-05

EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050.

AB 32 and CARB's Climate Change Scoping Plan

In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, the California Air Resources Board (CARB) is responsible for and is recognized as having the expertise to carry out and develop the programs and regulations necessary to achieve the GHG emissions reduction mandate of AB 32. Therefore, in furtherance of AB 32, CARB adopted regulations requiring the reporting and verification of GHG emissions from specified sources, such as industrial facilities, fuel suppliers and electricity importers (see Health & Safety Code Section 35830; Cal. Code Regs., tit. 17, §§95100 et seq.). CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO₂E). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change (2008 Scoping Plan)* in accordance with Health and Safety Code Section 38561. The *2008 Scoping Plan* established an overall framework for the measures to be implemented to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The *2008 Scoping Plan* evaluated opportunities for sector-specific reductions,

integrated all CARB and Climate Action Team¹ early actions and additional GHG reduction features by both entities, identified additional measures to be pursued as regulations, and outlined the role of a cap-and-trade program.

In the *2008 Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as “Business-As-Usual” [BAU]). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the *2008 Scoping Plan’s* Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (12 percent to 20 percent), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework (First Update)*. The stated purpose of the *First Update* was to “highlight California’s success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.” The *First Update* found that California was on track to meet the 2020 emissions reduction mandate established by AB 32, noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim goal of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its

¹ The Climate Action Team is comprised of state agency secretaries and heads of state agencies, boards and departments; these members work to coordinate statewide efforts to implement GHG emissions reduction programs and adaptation programs.

trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050 as set forth in S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's *Scoping Plan* to express the 2030 target in terms of MMT CO₂e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. Sector-specific agencies in transportation, energy, water, and forestry were required to prepare GHG reduction plans by September 2015, followed by a report on action taken in relation to these plans in June 2016.

SB 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction target; make changes to CARB's membership and increase legislative oversight of CARB's climate change-based activities; and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members. The legislation further requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and identify specific information for GHG emissions reduction measures when updating the scoping plan, including information regarding the range of projected GHG emissions and air pollution reductions that result from each measure and the cost-effectiveness (including avoided social costs) of each measure (see Health & Safety Code Section 38562.7).

2017 Climate Change Scoping Plan

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan* for public review and comment (CARB, 2017). This update includes CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030,² inclusive policies and broad support for clean technologies, enhanced industrial efficiency and competitiveness, prioritization of transportation sustainability, continued leadership on clean energy, putting waste resources to beneficial use, supporting resilient agricultural and rural economics and

² In July 2017, AB 398 was enacted into law, thereby extending the legislatively-authorized lifetime of the Cap-and-Trade Program to December 31, 2030.

natural and working lands, securing California's water supplies, and cleaning the air and public health. When discussing project-level GHG emissions reduction actions and thresholds, the *2017 Scoping Plan* states "[a]chieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *2017 Scoping Plan* also recognizes that such an achievement "may not be feasible or appropriate for every project ... and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA." CARB's Governing Board adopted the *2017 Scoping Plan* in December 2017.

In 2022 California released the latest scoping plan update which lays out the sector-by-sector roadmap for California to achieve carbon neutrality by 2045. This plan, addressing recent legislation and direction from Governor Newsom, extends and expands upon these earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045 (CARB, 2022). The plan suggests that bold steps are required by the State and calls for the need of vast research and development with respect to methods of capturing CO₂. The plan call for a need to take an unprecedented transformation and aggressively seek reductions to reduce the need of fossil fuels by moving to zero emission transportation, electrifying the cars, buses, trucks and trains. The plan relays on external controls and requires partnership and collaboration with the federal government, other U.S. states, and other jurisdictions around the world for California to succeed in achieving its climate targets.

Building Energy

Title 24, Part 6

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new buildings and alterations or additions to existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The California Energy Commission (CEC) is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The current code requirement is based on the 2022 standards, as those standards went into effect on January 1, 2023. The 2022 standards have mandatory requirements to

reduce building envelope air leakage, improve roofing through Solar Reflectance and Thermal Emittance, improve on insulation, improve on space conditioning, water heating and plumbing, improve on lighting efficiency requirements to name a few. The project will be required to implement Title 24 2022.

Title 24, Part 11

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards initially took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance
- Sixty-five (65) percent of construction and demolition waste must be diverted from landfills.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Inclusion of EV charging stations or designated spaces capable of supporting future charging stations
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15 percent improvement in energy requirements; stricter water conservation, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter water conservation, 75 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

The newest CALGreen Standards were updated in 2022 and will become effective on January 1, 2023. The updated Code includes modifications to current codes and will be a requirement to the Project. Mandatory requirements include many updated Electric Vehicle Charging requirements for multi and single family developments (California Title 24, Part 11, 2022).

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include: refrigerators, refrigerator-freezers and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems.

Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Mobile Sources

AB 1493

In response to the transportation sector accounting for more than half of California's CO₂ emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30 percent (CARB, 2017).

EO S-1-07

Issued in January 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO₂e grams per unit of fuel energy sold in California. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009 and began implementation in 2011. The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector.

The latest amendment to LCFS implementation regulations was in 2018 and CARB approved amendments which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32 (CARB, 2018).

SB 375

SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations (MPOs) are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan. The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible and if implemented, the GHG reduction targets. If a SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), a SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a cities or counties land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for SANDAG adopted in 2010 are a 7 percent reduction in emissions

per capita by 2020 and a 13 percent reduction by 2035; the targets are expressed as a percent change in per capita passenger vehicle GHG emissions relative to 2005.

In October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*, which contains the region's current SCS. In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region. More specifically, as set forth in CARB Executive Order G-15-075, CARB determined that SANDAG's SCS would achieve a 15 percent per capita reduction by 2020 and a 21 percent per capita reduction by 2035.

In 2018, CARB updated the SB 375 targets. For purposes of SANDAG, the updated targets include a 15 percent reduction in emissions per capita by 2020 and a 19 percent reduction by 2035 (CARB, 2018). SANDAG is in the process of preparing its next SCS, which will consider whether and how the region could attain these reduction targets.

Currently SANDAG is working on the 2021 Regional Plan. The current Draft Plan provides a big picture vision for how the San Diego region will grow through 2050 and beyond with an implementation program to help make the plan a reality. Within the Draft Plan, SANDAG introduced a transformative vision for transportation in San Diego County that completely reimagines how people and goods could move throughout the region in the 21st century. The plan outlines the "5 Big Moves" which are: Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and the Next OS. The SANDAG Board of Directors will be asked to adopt the 2021 Regional Plan in late 2021. Once adopted, it will become the region's long-term plan to be implemented incrementally through the Regional Transportation Improvement Program (RTIP) (SANDAG, 2021).

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB, 2017). To improve air quality, CARB also has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that, in 2025, cars will emit 75 percent less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, also has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025 (California Air Resources Board, 2012).

EO B-16-12

EO B-16-12 (March 2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution of ZEVs. This EO also sets a long-term target of reaching 1.5 million zero-emission vehicles on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on Zero-Emission Vehicles that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

SB 350

In 2015, SB 350 – the Clean Energy and Pollution Reduction Act – was enacted into law. 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 Public Utilities Code Section 740.12).

Renewable Energy Procurement

SB 1078

SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires 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 accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010.

SB X1 2

SB X1 2 (2011) expanded the RPS by establishing that 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 be secured from qualifying renewable energy sources. 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 of 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. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350

SB 350 (2015) further expanded the RPS by establishing that 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030 be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency.

SB 100

SB 100 (2018) has further accelerated and expanded the RPS, requiring achievement of a 50 percent RPS by December 31, 2026 and a 60 percent RPS by December 31, 2030. SB 100 also established a new statewide policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100 percent of electricity retail sales within the State of California by December 31, 2045.

Water

EO B-29-15

In response to drought-related concerns, 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 since 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 has 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.

Solid Waste

AB 939 and AB 341

AB 939 (1989), known as the Integrated Waste Management Act (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, which oversees 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.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 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 has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020.

Increasing the amount of commercial solid waste that is recycled, reused, or composted will reduce GHG emissions primarily by 1) reducing the energy requirements associated with the extraction, harvest, and processing of raw materials and 2) using recyclable materials that require less energy than raw materials to manufacture finished products (CalRecycle, 2020). Increased diversion of organic materials (green and food waste) will also reduce GHG emissions (CO₂ and CH₄) resulting from decomposition in landfills by redirecting this material to processes that use the solid waste material to produce vehicle fuels, heat, electricity, or compost.

3.2 GHG Thresholds of Significance

The City of San Marcos (City) adopted an updated Climate Action Plan (CAP) on December 8, 2020. The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State GHG emissions reduction targets. The CAP is a plan for the reduction of GHG emissions in accordance with (CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it is consistent with the City's CAP. The CAP set the following citywide targets (City of San Marcos, 2020).

- 4 percent below 2012 levels (575,000 MT CO₂e) by 2020,
- 42 percent below 2012 levels (347,000 MT CO₂e) by 2030

The City has also developed a Climate Action Plan Consistency Review Checklist (CAP Consistency Checklist), in conjunction with the CAP, to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. The CAP Consistency Guidance Memo dated July 15, 2020 summarizes the methodology and application of a GHG screening threshold which is set at 500 metric tons carbon dioxide equivalent [MT CO₂e] per year as outlined in the CAP

(Ascent, 2020). Projects that are projected to emit fewer than 500 MT CO₂e annually would not make a considerable contribution to the cumulative impact of climate change and would not need to provide additional analysis to demonstrate consistency with the CAP. It should be noted that this screening threshold is for new development projects consistent with the City's General Plan. When such a project exceeds the screening threshold, the project would be required to demonstrate consistency with the CAP through the CAP Consistency Checklist.

In most cases, compliance with the CAP Consistency Checklist would provide the CEQA streamlining path to allow project specific environmental documents, if eligible, to tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts. Projects that are consistent with the General Plan and implement CAP GHG reduction measures may incorporate by reference the CAP's cumulative GHG analysis. The City's CAP meets the requirements under Section 15183.5 of the CEQA Guidelines as a qualified plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. The CAP Consistency Checklist provides a streamlined review process for the GHG emissions analysis of proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA.

If a project is consistent with the existing General Plan land use designation(s), it can be determined to be consistent with the CAP projections and can move forward to Step 2 of the CAP Consistency Checklist.

In addition, some projects may seek a General Plan amendment. For these projects, the CAP Consistency Checklist requires a determination on whether the amendment would result in an equivalent or less GHG-intensive project when compared to the existing designations. In addition to providing evidence to support the conclusion that the project would generate fewer emissions than existing designations, these projects would demonstrate consistency with the CAP through completion of Step 2 of the CAP Consistency Checklist.

If a land use designation amendment results in a more GHG-intensive project, the project is required to prepare a quantitative GHG analysis based on applicable sections of the CEQA Guidelines.

4.0 METHODOLOGY

4.1 Construction CO₂e Emissions Calculation Methodology

GHGs related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 GHG model. The purpose of this analysis is to show compliance with CEQA through analysis using the City's CAP. This analysis focuses on the relative comparison between what is Proposed and the MU3 General Plan Buildout scenario. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project. The CalEEMod input/output model is shown in **Attachment A** for the Proposed Project and **Attachment B** for the MU3 General Plan Buildout scenario.

It should be noted that CalEEMod 2022 has been released though since its release has been updated 29 times. Utilization of the current release version 2022.1.1.13 is anticipated to results in lower GHG emissions and the 2020 version is considered conservative. Since the methodology of this analysis is to compare the relative intensities between the General Plan buildout scenario and the proposed Project to determine if consistency with the CAP would indeed generate a less than significant impact, CalEEMod 2020.4.0 would be sufficient.

The project would start grading sometime in 2024 with residential construction to start shortly thereafter. Grading for the project will consist of approximately 4,030 cubic yards (CY) of cut material and 12,270 CY of fill material requiring an import of approximately 8,240 CY of fill material. Table 4.1 describes the construction equipment and durations. Earthwork associated with grading within CalEEMod uses a "Grading Equipment Passes" methodology which has been approved by SCAQMD. As noted in CalEEMod documentation, this methodology was approved by CAPCOA (CAPCOA, 2021).

Table 4.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Site Preparation	06/01/2024	06/05/2024	
Graders			1
Scrapers			1
Tractors/Loaders/Backhoes			1
Grading	06/06/2024	06/13/2024	
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2
Building Construction	06/14/2024	04/17/2025	
Cranes			1
Forklifts			2
Generator Sets			1
Tractors/Loaders/Backhoes			1
Welders			3
Paving	02/21/2025	03/06/2025	
Pavers			1
Paving Equipment			1
Rollers			2
Architectural Coating	02/21/2025	04/17/2025	
Air Compressors			1
This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions provided by the project applicant.			

4.2 Operational Emissions Calculation Methodology

Once construction is complete, the proposed project would generate GHG emissions from daily operations which would include sources such as Area (or onsite emissions like landscaping), Energy usage from electricity and natural gas, mobile sources from vehicular traffic, municipal waste and from water uses, which are calculated within CalEEMod. For consistency with the CAP, the project was analyzed under the 2030 year scenario. Also, no hearth options were included within the modeling.

Title 24 efficiencies as modeled within CalEEMod utilize Title 24 (2019) as defaults, though the project will need to comply with the latest Title 24 (2022) standards at the time which building permits are issued. Since Title 24 (2022) increases on efficiencies this analysis is conservative.

Solid municipal waste generated in the form of trash is also considered within this analysis as the decomposition of organic material breaks down to form GHGs. GHGs from water are also

indirectly generated through the conveyance of the resource via pumping throughout the state and as necessary for wastewater treatment.

It should be noted that electrical energy-intensity factors were updated in CalEEMod 2020.4.0 to reflect San Diego Gas and Electric's (SDG&E) latest emissions rates which SDG&E provided to CAPCOA for the model update. CalEEMod 2016.3.2 (the model prior to 2020.4.0) was based on default emissions from 2009 which included a 10.5% RPS factor as indicated by California Public Utilities Commission (CPUC) (CPUC, 2016). The default CalEEMod 2020.4.0 emissions are now 540 pounds per megawatt hour (lb/MWh) which when compared with the defaults in 2016.3.2 represents a 33% achievement for RPS in 2020 which is consistent with SBX1-2. In accordance with SB 100, SDG&E will achieve an RPS of 60% in 2030. Table 4.2 identifies what the emissions in 2030 will be assuming a 60% RPS is achieved as required.

Table 4.2: SDG&E Energy Intensity Factors

GHG	2009 Factors (lbs/MWh) w/10.5% RPS	Current RPS Factors 2020 33% Achieved (lbs/MWh)	Current RPS Factors 2030 60% Achieved (lbs/MWh)
Carbon Dioxide (CO ₂)	720.49	539.98	322.38
Methane (CH ₄)	0.029	0.033	0.0197
Nitrous Oxide (N ₂ O)	0.006	0.004	0.0024

The Project traffic engineer estimated that the project would generate 874 daily trips (CR Associates, 2023). These traffic numbers were utilized within the CalEEMod analysis as the model. Traffic projections for the MU3 GP Development were estimated by the traffic engineer to be 2,200 trips under the MU3 scenario. This analysis uses a 5.4 mile trip distance which is consistent with the project's air quality assessment which uses methodologies looking at EMFAC total VMT divided by the total number of trips within the County of San Diego (LDN Consulting, 2021). It should be noted that the Air Quality report used a 2025 scenario and the VMT per trip may be slightly different in 2030. Since the project comparison would utilize the same year regardless, any changes in VMT per trip would be inconsequential. The EMFAC modeling results are provided as **Attachment C**. The trip distance is used for an illustrative comparative analysis for the project and is not intended to set a precedent for trip distances for projects in the City of San Marcos. Individual project analyses will continue to be assessed based on project-specific conditions and substantiated trip distances.

Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year. The operational modeling results for the proposed development and the MU3 General Plan Buildout scenario can also be seen in **Attachments A** and **-B** respectively.

5.0 FINDINGS

5.1 Project Related Construction Emissions

Utilizing the CALEEMOD 2020.4.0 construction inputs as shown in Table 4.1, we find that construction of the project will produce approximately 413.62 MT of CO₂e over the construction life of the project. Given the fact that the total emissions would ultimately contribute to cumulative levels, construction emissions of GHGs were annualized to allow for inclusion in operational emissions estimates, consistent with the South Coast Air Quality Management District (SCAQMD) recommendations for construction GHG emissions (SCAQMD, 2008). Construction emissions were annualized over a 30-year period, per SCAQMD recommendations, to account for emissions generated over the assumed project lifetime. Given this, the Project would add approximately 13.78 MT CO₂e per year from construction which were added to annual operational emissions estimates. A summary of the construction emissions is shown in Table 5.1.

Table 5.1: Expected Annual Construction CO₂e Emissions Summary

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT)
2024	0.00	270.39	270.39	0.03	0.01	274.49
2025	0.00	137.71	137.71	0.02	0.00	139.13
Total Construction Emissions						413.62
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						13.78
Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 4.1.						

5.2 Proposed Project Operational Emissions

Once construction is completed the proposed project would generate GHG emissions from daily operations which would include sources such as area, energy, mobile, solid waste and water uses, which are calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from electricity usage and natural gas. Solid waste generated in the form of trash is also considered as decomposition of organic material breaks down to form GHGs. Water sources include standard residential uses including landscaping activities.

This analysis is driven by the CAP and since this Project seeks a General Plan Amendment, the proposed Project is analyzed in comparison with existing designations to determine if it would be less intense than what would otherwise be approved under the existing General

Plan. If a project's proposed amendment to the General Plan results in lower GHG emissions than development under the General Plan, the project would be required to implement the applicable CAP Measures identified in Step 2 of the CAP Consistency Checklist. Based on this, quantifiable measures such as EV Chargers are provided. The CAP Checklist is provided as **Attachment D** to this report.

The proposed project has up to 147 parking spaces and would include 8 Electric Vehicle Charging Stations. The project has been designed to meet the requirements of CAP Measure T-2 (Electric Vehicle Charging Stations), which requires the project to install EV charging stations (Level 2 or better) in at least five percent of the total parking spaces provided onsite. The City's CAP estimated that in the year 2030, 363 MT CO₂e will be reduced from 220 installed Electric Vehicle chargers or 1.65 MT CO₂e per charger (San Marcos, 2020). Based on the City's CAP, each multi-family EV charging station would reduce GHG emission by 1.65 MT CO₂e per charger or 13.25 MT CO₂e reduction from the EV chargers.

Proposed Project Findings

Table 5.2 indicates that the Project operations would generate 614.83 MT CO₂e per year without incorporating any CAP measures. When amortized construction emissions are added in, the project would generate 628.64 MT CO₂e per year. With the incorporation of CAP Measure T-2, the provision of 8 Level 2 electric vehicle charging stations, the project would generate 615.37 MT CO₂e as can be seen in Table 5.2. The Project would however be required to implement all CAP measures and these measures would further reduce GHG emissions. Since the intent of this analysis is to compare the proposed Project with the MU3 General Plan Buildout scenario, not all CAP measures were calculated.

Table 5.2: Proposed Project Operational Emissions Summary (MT/Year)

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	1.45	1.45	0.00	0.00	1.48
Energy	0.00	123.66	123.66	0.01	0.00	124.20
Mobile	0.00	417.96	417.96	0.03	0.02	424.87
Waste	11.96	0.00	11.96	0.71	0.00	29.64
Water	2.55	23.56	26.12	0.26	0.01	34.60
Operations Total						614.79
Construction Emissions (See Table 5.1 above)						13.78
Construction and Operations						628.64
CAP Measure T-2: EV Charger Reduction						-13.2
Project GHG Emissions						615.37
Data is presented in decimal format and may have rounding errors.						

5.3 MU3 General Plan Buildout Construction Emissions

The MU3 buildout scenario is assumed to have a similar construction footprint as the proposed project. A similar construction model was prepared based on default settings though did include manual updates similar to the project to reflect an identical cut/fill/import scenario. The equipment list as well as durations are identical for the MU3 General Plan Buildout Scenario as shown in Table 4.1 above. Table 5.3 shows the construction emissions from the MU3 General Plan Buildout Scenario. As noted, the construction emissions are not the same since the building land uses and areas are different.

Table 5.3: MU3 General Plan Annual Construction CO₂e Emissions Summary

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT)
2024	0.00	262.39	262.39	0.03	0.01	266.20
2025	0.00	149.30	149.30	0.02	0.01	151.35
Total Construction Emissions						417.55
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						13.92
Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 4.1.						

5.4 MU3 General Plan Buildout Scenario Operational Emissions

Once construction is completed the MU3 General Plan Buildout scenario would generate GHG emissions from sources as described in Section 5.2 above. Under this scenario, since it is non-residential, not all the same CAP measures would apply. Applicable CAP measures considered in this analysis include Measures T-2 (Electric Vehicle Charging Stations) and Measures E-2 (Photovoltaic Installation).

The City's CAP estimated that in the year 2030 based on a City wide analysis, 2,130 MT CO₂e will be reduced from 234 installed commercial Electric Vehicle chargers or 9.10 MT CO₂e per charger (San Marcos, 2020). Utilizing the same reductions for this site, the MU3 General Plan Buildout scenario would have 400 parking locations and would include 20 Electric Vehicle Charging Stations. Based on the City's CAP, each commercial EV charging station would reduce GHG emission by 9.1 MT CO₂e per charger or 182 MT CO₂e reduction from the 20 chargers required by the CAP measure. It should be noted that these estimates are scaled down from CAP calculations for illustrative purposes only. Projects that may need to attribute quantified reductions to these measures in the future would conduct a project-specific bottom-up analysis of estimated reductions.

Based on the City's CAP, the total cumulative PV system in San Marcos was 10.3 megawatts direct current (MWdc) and that amount of solar generated 17,585 megawatt hours (MWh) or 1,707.28 MWh per MWdc installed. Since it is assumed that all renewable energy sources generated by SDG&E or generated within SDG&Es service network, any renewable source added by the project would offset non-renewable generation. CalEEMod indicates that GHG intensities from electrical (identified in Table 4.2) could be as high as those generated in 2009 but would likely even be higher since in 2009, SDG&E received power from San Onofre Nuclear Generation Station. Based on the emission factors presented in the CAP, GHG emissions from solar would save roughly 651 lbs CO₂e per MWh produced.

The MU3 General Plan Buildout scenario is 90,000 SF of office and 10,000 SF of retail and would therefore be required to install 200 kWdc of solar or 0.2 MWdc. Based on this, the MU3 General Plan Buildout scenario would generate roughly 341.5 MWh of energy per year (1,707.28 MWh/MWdc * 0.2 MWdc) and would save 111 tons per year which converts to 100.8 MT CO₂e per year since 1 US ton is equivalent to 0.907 MT.

Table 5.4 indicates that the MU3 General Plan Buildout Scenario would generate 1,488.14 MT CO₂e per year without incorporating any CAP measures. This scenario would be required to implement all of the CAP measures identified in Section 2 of the CAP Consistency Checklist and these measures would further reduce GHG emissions though quantification is difficult. When reduction for CAP measures T-2 and E-2 are considered, the MU3 General Plan Buildout scenario would generate 1,219.26 MT CO₂e per year.

Table 5.4: MU3 General Plan Buildout Operational Emissions Summary (MT/Year)

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.01	0.01	0.00	0.00	0.01
Energy	0.00	368.17	368.17	0.02	0.00	369.67
Mobile	0.00	983.01	983.01	0.08	0.05	999.61
Waste	19.12	0.00	19.12	1.13	0.00	47.37
Water	5.31	48.53	53.84	0.55	0.01	71.48
Operations Total						1,488.14
Construction Emissions (See Table 5.1 above)						13.92
Construction and Operations						1,502.06
CAP Measure T-2: EV Charger Reduction						-182
CAP Measure E-2: Solar PV Installation						-100.8
MU3 General Plan Buildout Scenario Project GHG Emissions						1,219.26
Data is presented in decimal format and may have rounding errors.						

Comparison of the Proposed Project and the MU3 General Plan Buildout Scenario

When the proposed Project's GHG emissions are compared to the GHG emissions estimated under the MU3 General Plan Buildout scenario, the Project would have an estimated 49.5 percent less intense carbon footprint than would otherwise be assumed in the City's General Plan or 615.37 MT CO₂e per year compared to 1,219.26 MT CO₂e per year. This is driven largely by the reduced number of vehicle trips that would occur under the proposed project compared to buildout under the General Plan.

5.5 CEQA Compliance

SB 97 directed amendments to the CEQA statute to specifically establish that GHG emissions and their impacts are appropriate subjects for CEQA analysis. Under SB 97 the project should be able to answer the follow questions for CEQA compliance.

1. Will the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The City is committed to reducing its GHG emissions consistent with SB 32. Based on this requirement, the City's CAP concludes that proposed General Plan amendments would be consistent with the CAP so long as the GHG emission generated by the amendment are less than would otherwise be produced by a consistent General Plan buildout scenario.

The proposed project was found to emit 615.37 MT CO₂e per year and the MU3 General Plan Buildout scenario was estimated to generate 1,219.26 MT CO₂e per year. The Project would therefore a less intense carbon footprint by an estimated 49.5 percent when compared to what would otherwise be assumed in the City's General Plan. Given this, the project would be required to implement CAP measures applicable to the project. Based on the fact the Project will be consistent with the CAP, a less than significant impact would be expected on the environment with respect the GHG emissions from the project. The CAP Consistency Checklist is provided as **Attachment D** to this report.

2. Will the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project was found to emit 615.37 MT CO₂e per year and the MU3 General Plan Buildout scenario would generate 1,219.26 MT CO₂e per year. The Project would therefore result in a less intense carbon footprint by 49.5 percent when compared to what would otherwise be assumed in the City's General Plan. CAP consistency can be assumed as long as the amendment results in an equivalent or less GHG-intensive project when compared to the

existing designations. In addition to providing evidence to support the conclusion that the project would generate fewer emissions than existing designations, these projects would demonstrate consistency with the CAP through completion of Step 2 of the CAP Consistency Checklist. Based on this, a less than significant impact would be expected by the project through the implementation of CAP measures by the Project.

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ATTACHMENT A

CalEEMod Emission Model – Proposed Project

Capalina 119 Unit Multi-Family Operational Year 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Capalina 119 Unit Multi-Family Operational Year 2030
San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	147.00	Space	1.32	58,800.00	0
Apartment Mid Rise	119.00	Dwelling Unit	1.10	119,000.00	340
Strip Mall	4.00	1000sqft	0.09	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	322.38	CH4 Intensity (lb/MWhr)	0.02	N2O Intensity (lb/MWhr)	0.002

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - RPS 2030
- Land Use - 2.51 acres
- Construction Phase - CS
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Trips and VMT -
- Grading - 8240CY of import
- Architectural Coating - Rule 67 Paint
- Vehicle Trips - Per Traffic Study

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No Hearth

Area Coating - Rule 67 Paint

Energy Use -

Construction Off-road Equipment Mitigation - T4

Area Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	40.00
tblFireplaces	NumberGas	65.45	0.00
tblFireplaces	NumberNoFireplace	11.90	119.00
tblFireplaces	NumberWood	41.65	0.00
tblGrading	MaterialImported	0.00	8,240.00
tblLandUse	LotAcreage	3.13	1.10
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.02
tblProjectCharacteristics	CO2IntensityFactor	539.98	322.38
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	HO_TL	7.50	5.40

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	HS_TL	7.30	5.40
tblVehicleTrips	HW_TL	10.80	5.40
tblVehicleTrips	ST_TR	4.91	6.00
tblVehicleTrips	ST_TR	42.04	40.00
tblVehicleTrips	SU_TR	4.09	6.00
tblVehicleTrips	SU_TR	20.43	40.00
tblVehicleTrips	WD_TR	5.44	6.00
tblVehicleTrips	WD_TR	44.32	40.00
tblWoodstoves	NumberCatalytic	5.95	0.00
tblWoodstoves	NumberNoncatalytic	5.95	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1434	1.1334	1.2648	3.0600e-003	0.1085	0.0423	0.1508	0.0334	0.0404	0.0737	0.0000	270.3878	270.3878	0.0345	0.0109	274.4862
2025	0.8493	0.5605	0.7309	1.5800e-003	0.0444	0.0210	0.0654	0.0119	0.0200	0.0320	0.0000	137.7124	137.7124	0.0183	3.2300e-003	139.1298
Maximum	0.8493	1.1334	1.2648	3.0600e-003	0.1085	0.0423	0.1508	0.0334	0.0404	0.0737	0.0000	270.3878	270.3878	0.0345	0.0109	274.4862

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0482	0.4373	1.3346	3.0600e-003	0.1085	4.0200e-003	0.1125	0.0334	3.9500e-003	0.0373	0.0000	270.3877	270.3877	0.0345	0.0109	274.4860
2025	0.7997	0.2013	0.7746	1.5800e-003	0.0444	1.9700e-003	0.0464	0.0119	1.9500e-003	0.0139	0.0000	137.7123	137.7123	0.0183	3.2300e-003	139.1297
Maximum	0.7997	0.4373	1.3346	3.0600e-003	0.1085	4.0200e-003	0.1125	0.0334	3.9500e-003	0.0373	0.0000	270.3877	270.3877	0.0345	0.0109	274.4860

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	14.58	62.30	-5.69	0.00	0.00	90.53	26.49	0.00	90.24	51.58	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
5	6-1-2024	8-31-2024	0.5819	0.2314
6	9-1-2024	11-30-2024	0.5182	0.1860
7	12-1-2024	2-28-2025	0.6267	0.2985
8	3-1-2025	5-31-2025	0.9566	0.7655
		Highest	0.9566	0.7655

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5878	0.0102	0.8826	5.0000e-005		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003	0.0000	1.4460	1.4460	1.3800e-003	0.0000	1.4806
Energy	4.7200e-003	0.0403	0.0173	2.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	123.6593	123.6593	5.6700e-003	1.3300e-003	124.1984
Mobile	0.2713	0.2437	2.2501	4.2700e-003	0.5311	3.1000e-003	0.5342	0.1417	2.8900e-003	0.1446	0.0000	417.9629	417.9629	0.0330	0.0204	424.8748
Waste						0.0000	0.0000		0.0000	0.0000	11.9643	0.0000	11.9643	0.7071	0.0000	29.6410
Water						0.0000	0.0000		0.0000	0.0000	2.5538	23.5629	26.1167	0.2638	6.3400e-003	34.5999
Total	0.8639	0.2942	3.1500	4.5800e-003	0.5311	0.0113	0.5424	0.1417	0.0111	0.1528	14.5181	566.6311	581.1492	1.0108	0.0281	614.7946

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5878	0.0102	0.8826	5.0000e-005		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003	0.0000	1.4460	1.4460	1.3800e-003	0.0000	1.4806
Energy	4.7200e-003	0.0403	0.0173	2.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	123.6593	123.6593	5.6700e-003	1.3300e-003	124.1984
Mobile	0.2713	0.2437	2.2501	4.2700e-003	0.5311	3.1000e-003	0.5342	0.1417	2.8900e-003	0.1446	0.0000	417.9629	417.9629	0.0330	0.0204	424.8748
Waste						0.0000	0.0000		0.0000	0.0000	11.9643	0.0000	11.9643	0.7071	0.0000	29.6410
Water						0.0000	0.0000		0.0000	0.0000	2.5538	23.5629	26.1167	0.2638	6.3400e-003	34.5999
Total	0.8639	0.2942	3.1500	4.5800e-003	0.5311	0.0113	0.5424	0.1417	0.0111	0.1528	14.5181	566.6311	581.1492	1.0108	0.0281	614.7946

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2024	6/5/2024	5	3	
2	Grading	Grading	6/6/2024	6/13/2024	5	6	
3	Building Construction	Building Construction	6/14/2024	4/17/2025	5	220	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Paving	Paving	2/21/2025	3/6/2025	5	10
5	Architectural Coating	Architectural Coating	2/21/2025	4/17/2025	5	40

Acres of Grading (Site Preparation Phase): 4.5**Acres of Grading (Grading Phase): 6****Acres of Paving: 1.32**

Residential Indoor: 240,975; Residential Outdoor: 80,325; Non-Residential Indoor: 6,000; Non-Residential Outdoor: 2,000; Striped Parking Area: 3,528 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	1,030.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	112.00	23.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8600e-003	0.0197	0.0144	4.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561
Total	1.8600e-003	0.0197	0.0144	4.0000e-005	2.3900e-003	7.5000e-004	3.1400e-003	2.6000e-004	6.9000e-004	9.5000e-004	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0752	0.0752	0.0000	0.0000	0.0758
Total	3.0000e-005	2.0000e-005	2.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0752	0.0752	0.0000	0.0000	0.0758

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	1.9600e-003	0.0178	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561
Total	4.5000e-004	1.9600e-003	0.0178	4.0000e-005	2.3900e-003	6.0000e-005	2.4500e-003	2.6000e-004	6.0000e-005	3.2000e-004	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0752	0.0752	0.0000	0.0000	0.0758
Total	3.0000e-005	2.0000e-005	2.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0752	0.0752	0.0000	0.0000	0.0758

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0218	0.0000	0.0218	0.0104	0.0000	0.0104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-003	0.0415	0.0261	6.0000e-005		1.7200e-003	1.7200e-003		1.5800e-003	1.5800e-003	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750
Total	3.9000e-003	0.0415	0.0261	6.0000e-005	0.0218	1.7200e-003	0.0236	0.0104	1.5800e-003	0.0119	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750

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3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1200e-003	0.0693	0.0189	3.0000e-004	8.8200e-003	5.8000e-004	9.4000e-003	2.4200e-003	5.5000e-004	2.9700e-003	0.0000	30.3636	30.3636	1.6000e-003	4.8300e-003	31.8437
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	6.4000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1879	0.1879	1.0000e-005	0.0000	0.1895
Total	1.2000e-003	0.0693	0.0195	3.0000e-004	9.0600e-003	5.8000e-004	9.6400e-003	2.4800e-003	5.5000e-004	3.0400e-003	0.0000	30.5515	30.5515	1.6100e-003	4.8300e-003	32.0333

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0218	0.0000	0.0218	0.0104	0.0000	0.0104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6000e-004	3.2800e-003	0.0327	6.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750
Total	7.6000e-004	3.2800e-003	0.0327	6.0000e-005	0.0218	1.0000e-004	0.0219	0.0104	1.0000e-004	0.0105	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1200e-003	0.0693	0.0189	3.0000e-004	8.8200e-003	5.8000e-004	9.4000e-003	2.4200e-003	5.5000e-004	2.9700e-003	0.0000	30.3636	30.3636	1.6000e-003	4.8300e-003	31.8437
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	6.4000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1879	0.1879	1.0000e-005	0.0000	0.1895
Total	1.2000e-003	0.0693	0.0195	3.0000e-004	9.0600e-003	5.8000e-004	9.6400e-003	2.4800e-003	5.5000e-004	3.0400e-003	0.0000	30.5515	30.5515	1.6100e-003	4.8300e-003	32.0333

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1142	0.9169	1.0082	1.7900e-003		0.0385	0.0385		0.0368	0.0368	0.0000	148.5155	148.5155	0.0277	0.0000	149.2070
Total	0.1142	0.9169	1.0082	1.7900e-003		0.0385	0.0385		0.0368	0.0368	0.0000	148.5155	148.5155	0.0277	0.0000	149.2070

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2024****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8600e-003	0.0725	0.0252	3.3000e-004	0.0109	4.3000e-004	0.0114	3.1500e-003	4.1000e-004	3.5700e-003	0.0000	32.4222	32.4222	1.0200e-003	4.7000e-003	33.8476
Worker	0.0204	0.0135	0.1713	5.4000e-004	0.0642	3.4000e-004	0.0646	0.0171	3.1000e-004	0.0174	0.0000	50.1624	50.1624	1.3700e-003	1.3200e-003	50.5914
Total	0.0222	0.0860	0.1964	8.7000e-004	0.0751	7.7000e-004	0.0759	0.0202	7.2000e-004	0.0210	0.0000	82.5846	82.5846	2.3900e-003	6.0200e-003	84.4390

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0236	0.2767	1.0679	1.7900e-003		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003	0.0000	148.5153	148.5153	0.0277	0.0000	149.2068
Total	0.0236	0.2767	1.0679	1.7900e-003		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003	0.0000	148.5153	148.5153	0.0277	0.0000	149.2068

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8600e-003	0.0725	0.0252	3.3000e-004	0.0109	4.3000e-004	0.0114	3.1500e-003	4.1000e-004	3.5700e-003	0.0000	32.4222	32.4222	1.0200e-003	4.7000e-003	33.8476
Worker	0.0204	0.0135	0.1713	5.4000e-004	0.0642	3.4000e-004	0.0646	0.0171	3.1000e-004	0.0174	0.0000	50.1624	50.1624	1.3700e-003	1.3200e-003	50.5914
Total	0.0222	0.0860	0.1964	8.7000e-004	0.0751	7.7000e-004	0.0759	0.0202	7.2000e-004	0.0210	0.0000	82.5846	82.5846	2.3900e-003	6.0200e-003	84.4390

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0574	0.4629	0.5393	9.6000e-004		0.0181	0.0181		0.0173	0.0173	0.0000	79.9781	79.9781	0.0147	0.0000	80.3448
Total	0.0574	0.4629	0.5393	9.6000e-004		0.0181	0.0181		0.0173	0.0173	0.0000	79.9781	79.9781	0.0147	0.0000	80.3448

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7000e-004	0.0387	0.0133	1.7000e-004	5.8800e-003	2.3000e-004	6.1100e-003	1.7000e-003	2.2000e-004	1.9200e-003	0.0000	17.1253	17.1253	5.6000e-004	2.4800e-003	17.8784
Worker	0.0103	6.5800e-003	0.0866	2.8000e-004	0.0346	1.7000e-004	0.0348	9.1900e-003	1.6000e-004	9.3500e-003	0.0000	26.3508	26.3508	6.7000e-004	6.7000e-004	26.5671
Total	0.0113	0.0452	0.0999	4.5000e-004	0.0405	4.0000e-004	0.0409	0.0109	3.8000e-004	0.0113	0.0000	43.4761	43.4761	1.2300e-003	3.1500e-003	44.4455

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0127	0.1490	0.5750	9.6000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	79.9780	79.9780	0.0147	0.0000	80.3447
Total	0.0127	0.1490	0.5750	9.6000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	79.9780	79.9780	0.0147	0.0000	80.3447

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7000e-004	0.0387	0.0133	1.7000e-004	5.8800e-003	2.3000e-004	6.1100e-003	1.7000e-003	2.2000e-004	1.9200e-003	0.0000	17.1253	17.1253	5.6000e-004	2.4800e-003	17.8784
Worker	0.0103	6.5800e-003	0.0866	2.8000e-004	0.0346	1.7000e-004	0.0348	9.1900e-003	1.6000e-004	9.3500e-003	0.0000	26.3508	26.3508	6.7000e-004	6.7000e-004	26.5671
Total	0.0113	0.0452	0.0999	4.5000e-004	0.0405	4.0000e-004	0.0409	0.0109	3.8000e-004	0.0113	0.0000	43.4761	43.4761	1.2300e-003	3.1500e-003	44.4455

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9700e-003	0.0287	0.0457	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	6.1572	6.1572	1.9900e-003	0.0000	6.2070
Paving	1.7300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.7000e-003	0.0287	0.0457	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	6.1572	6.1572	1.9900e-003	0.0000	6.2070

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3056	0.3056	1.0000e-005	1.0000e-005	0.3081
Total	1.2000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3056	0.3056	1.0000e-005	1.0000e-005	0.3081

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.6000e-004	3.7400e-003	0.0532	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	6.1572	6.1572	1.9900e-003	0.0000	6.2070
Paving	1.7300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.5900e-003	3.7400e-003	0.0532	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	6.1572	6.1572	1.9900e-003	0.0000	6.2070

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.5 Paving - 2025****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3056	0.3056	1.0000e-005	1.0000e-005	0.3081
Total	1.2000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3056	0.3056	1.0000e-005	1.0000e-005	0.3081

3.6 Architectural Coating - 2025**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7713					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4200e-003	0.0229	0.0362	6.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135
Total	0.7748	0.0229	0.0362	6.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135

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3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0500e-003	6.7000e-004	8.8400e-003	3.0000e-005	3.5300e-003	2.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.5000e-004	0.0000	2.6889	2.6889	7.0000e-005	7.0000e-005	2.7109
Total	1.0500e-003	6.7000e-004	8.8400e-003	3.0000e-005	3.5300e-003	2.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.5000e-004	0.0000	2.6889	2.6889	7.0000e-005	7.0000e-005	2.7109

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7713					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9000e-004	2.5800e-003	0.0367	6.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135
Total	0.7719	2.5800e-003	0.0367	6.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.6 Architectural Coating - 2025****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0500e-003	6.7000e-004	8.8400e-003	3.0000e-005	3.5300e-003	2.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.5000e-004	0.0000	2.6889	2.6889	7.0000e-005	7.0000e-005	2.7109
Total	1.0500e-003	6.7000e-004	8.8400e-003	3.0000e-005	3.5300e-003	2.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.5000e-004	0.0000	2.6889	2.6889	7.0000e-005	7.0000e-005	2.7109

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2713	0.2437	2.2501	4.2700e-003	0.5311	3.1000e-003	0.5342	0.1417	2.8900e-003	0.1446	0.0000	417.9629	417.9629	0.0330	0.0204	424.8748
Unmitigated	0.2713	0.2437	2.2501	4.2700e-003	0.5311	3.1000e-003	0.5342	0.1417	2.8900e-003	0.1446	0.0000	417.9629	417.9629	0.0330	0.0204	424.8748

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	714.00	714.00	714.00	1,246,331	1,246,331
Parking Lot	0.00	0.00	0.00		
Strip Mall	160.00	160.00	160.00	173,846	173,846
Total	874.00	874.00	874.00	1,420,178	1,420,178

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.40	5.40	5.40	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	5.40	5.40	5.40	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Parking Lot	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

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Strip Mall	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	76.9804	76.9804	4.7800e-003	4.8000e-004	77.2421
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	76.9804	76.9804	4.7800e-003	4.8000e-004	77.2421
NaturalGas Mitigated	4.7200e-003	0.0403	0.0173	2.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	46.6789	46.6789	8.9000e-004	8.6000e-004	46.9563
NaturalGas Unmitigated	4.7200e-003	0.0403	0.0173	2.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	46.6789	46.6789	8.9000e-004	8.6000e-004	46.9563

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	865850	4.6700e-003	0.0399	0.0170	2.5000e-004		3.2300e-003	3.2300e-003		3.2300e-003	3.2300e-003	0.0000	46.2051	46.2051	8.9000e-004	8.5000e-004	46.4796
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	8880	5.0000e-005	4.4000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4739	0.4739	1.0000e-005	1.0000e-005	0.4767
Total		4.7200e-003	0.0403	0.0174	2.5000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	46.6789	46.6789	9.0000e-004	8.6000e-004	46.9563

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	865850	4.6700e-003	0.0399	0.0170	2.5000e-004		3.2300e-003	3.2300e-003		3.2300e-003	3.2300e-003	0.0000	46.2051	46.2051	8.9000e-004	8.5000e-004	46.4796
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	8880	5.0000e-005	4.4000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4739	0.4739	1.0000e-005	1.0000e-005	0.4767
Total		4.7200e-003	0.0403	0.0174	2.5000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	46.6789	46.6789	9.0000e-004	8.6000e-004	46.9563

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	456977	66.8233	4.1500e- 003	4.1000e- 004	67.0505
Parking Lot	20580	3.0094	1.9000e- 004	2.0000e- 005	3.0196
Strip Mall	48880	7.1477	4.4000e- 004	4.0000e- 005	7.1720
Total		76.9804	4.7800e- 003	4.7000e- 004	77.2421

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	456977	66.8233	4.1500e-003	4.1000e-004	67.0505
Parking Lot	20580	3.0094	1.9000e-004	2.0000e-005	3.0196
Strip Mall	48880	7.1477	4.4000e-004	4.0000e-005	7.1720
Total		76.9804	4.7800e-003	4.7000e-004	77.2421

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5878	0.0102	0.8826	5.0000e-005		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003	0.0000	1.4460	1.4460	1.3800e-003	0.0000	1.4806
Unmitigated	0.5878	0.0102	0.8826	5.0000e-005		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003	0.0000	1.4460	1.4460	1.3800e-003	0.0000	1.4806

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4842					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0265	0.0102	0.8826	5.0000e-005		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003	0.0000	1.4460	1.4460	1.3800e-003	0.0000	1.4806
Total	0.5878	0.0102	0.8826	5.0000e-005		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003	0.0000	1.4460	1.4460	1.3800e-003	0.0000	1.4806

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4842					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0265	0.0102	0.8826	5.0000e-005		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003	0.0000	1.4460	1.4460	1.3800e-003	0.0000	1.4806
Total	0.5878	0.0102	0.8826	5.0000e-005		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003	0.0000	1.4460	1.4460	1.3800e-003	0.0000	1.4806

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	26.1167	0.2638	6.3400e-003	34.5999
Unmitigated	26.1167	0.2638	6.3400e-003	34.5999

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.75333 / 4.88797	25.1635	0.2541	6.1100e-003	33.3345
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.29629 / 0.181597	0.9532	9.7100e-003	2.3000e-004	1.2654
Total		26.1167	0.2638	6.3400e-003	34.5999

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.75333 / 4.88797	25.1635	0.2541	6.1100e-003	33.3345
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.29629 / 0.181597	0.9532	9.7100e-003	2.3000e-004	1.2654
Total		26.1167	0.2638	6.3400e-003	34.5999

8.0 Waste Detail**8.1 Mitigation Measures Waste**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.9643	0.7071	0.0000	29.6410
Unmitigated	11.9643	0.7071	0.0000	29.6410

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	54.74	11.1117	0.6567	0.0000	27.5288
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		11.9643	0.7071	0.0000	29.6410

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	54.74	11.1117	0.6567	0.0000	27.5288
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		11.9643	0.7071	0.0000	29.6410

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

ATTACHMENT B

CalEEMod Emission Model – MU3 General Plan Buildout Scenario

Capalina 90KSF Office 10 KSF Retail GP Buildout Operational Year 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Capalina 90KSF Office 10 KSF Retail GP Buildout Operational Year 2030
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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	90.00	1000sqft	0.77	90,000.00	0
Enclosed Parking with Elevator	250.00	Space	0.16	100,000.00	0
Parking Lot	150.00	Space	1.35	60,000.00	0
Strip Mall	10.00	1000sqft	0.23	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	322.38	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.002

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2030

Land Use - 2.51 acre

Construction Phase - Construction Schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Architectural Coating - Rule 67 Paint

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Trips - Per Traffic Study

Area Coating - Rule 67 Paint

Construction Off-road Equipment Mitigation - t4

Area Mitigation - per Design Feature

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	40.00
tblLandUse	LotAcreage	2.07	0.77
tblLandUse	LotAcreage	2.25	0.16
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.02
tblProjectCharacteristics	CO2IntensityFactor	539.98	322.38
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	ST_TR	2.21	20.00
tblVehicleTrips	ST_TR	42.04	40.00
tblVehicleTrips	SU_TR	0.70	20.00
tblVehicleTrips	SU_TR	20.43	40.00
tblVehicleTrips	WD_TR	9.74	20.00
tblVehicleTrips	WD_TR	44.32	40.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1415	1.1256	1.2479	2.9800e-003	0.1012	0.0420	0.1432	0.0316	0.0402	0.0718	0.0000	262.3950	262.3950	0.0336	9.9600e-003	266.2029
2025	0.5633	0.5933	0.7316	1.6900e-003	0.0452	0.0211	0.0663	0.0123	0.0202	0.0325	0.0000	149.3009	149.3009	0.0187	5.3000e-003	151.3461
Maximum	0.5633	1.1256	1.2479	2.9800e-003	0.1012	0.0420	0.1432	0.0316	0.0402	0.0718	0.0000	262.3950	262.3950	0.0336	9.9600e-003	266.2029

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0464	0.4295	1.3177	2.9800e-003	0.1012	3.7800e-003	0.1049	0.0316	3.7300e-003	0.0353	0.0000	262.3949	262.3949	0.0336	9.9600e-003	266.2027
2025	0.5137	0.2341	0.7753	1.6900e-003	0.0452	2.1500e-003	0.0473	0.0123	2.1200e-003	0.0144	0.0000	149.3008	149.3008	0.0187	5.3000e-003	151.3460
Maximum	0.5137	0.4295	1.3177	2.9800e-003	0.1012	3.7800e-003	0.1049	0.0316	3.7300e-003	0.0353	0.0000	262.3949	262.3949	0.0336	9.9600e-003	266.2027

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	20.54	61.39	-5.73	0.00	0.00	90.61	27.32	0.00	90.31	52.31	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2024	8-31-2024	0.5404	0.1899
2	9-1-2024	11-30-2024	0.5455	0.2133
3	12-1-2024	2-28-2025	0.6131	0.2850
4	3-1-2025	5-31-2025	0.7260	0.5349
		Highest	0.7260	0.5349

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4499	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Energy	9.8400e-003	0.0895	0.0751	5.4000e-004		6.8000e-003	6.8000e-003		6.8000e-003	6.8000e-003	0.0000	368.1707	368.1707	0.0187	3.4700e-003	369.6700
Mobile	0.6634	0.5846	5.3967	0.0101	1.2453	7.3500e-003	1.2526	0.3323	6.8500e-003	0.3392	0.0000	983.0128	983.0128	0.0794	0.0491	999.6138
Waste						0.0000	0.0000		0.0000	0.0000	19.1218	0.0000	19.1218	1.1301	0.0000	47.3733
Water						0.0000	0.0000		0.0000	0.0000	5.3098	48.5329	53.8427	0.5484	0.0132	71.4793
Total	1.1232	0.6741	5.4764	0.0106	1.2453	0.0142	1.2594	0.3323	0.0137	0.3460	24.4316	1,399.7253	1,424.1568	1.7765	0.0657	1,488.1459

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4499	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Energy	9.8400e-003	0.0895	0.0751	5.4000e-004		6.8000e-003	6.8000e-003		6.8000e-003	6.8000e-003	0.0000	368.1707	368.1707	0.0187	3.4700e-003	369.6700
Mobile	0.6634	0.5846	5.3967	0.0101	1.2453	7.3500e-003	1.2526	0.3323	6.8500e-003	0.3392	0.0000	983.0128	983.0128	0.0794	0.0491	999.6138
Waste						0.0000	0.0000		0.0000	0.0000	19.1218	0.0000	19.1218	1.1301	0.0000	47.3733
Water						0.0000	0.0000		0.0000	0.0000	5.3098	48.5329	53.8427	0.5484	0.0132	71.4793
Total	1.1232	0.6741	5.4764	0.0106	1.2453	0.0142	1.2594	0.3323	0.0137	0.3460	24.4316	1,399.7253	1,424.1568	1.7765	0.0657	1,488.1459

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2024	6/5/2024	5	3	
2	Grading	Grading	6/6/2024	6/13/2024	5	6	
3	Building Construction	Building Construction	6/14/2024	4/17/2025	5	220	

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4	Paving	Paving	2/21/2025	3/6/2025	5	10
5	Architectural Coating	Architectural Coating	2/21/2025	4/17/2025	5	40

Acres of Grading (Site Preparation Phase): 4.5**Acres of Grading (Grading Phase): 6****Acres of Paving: 1.51****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150,000; Non-Residential Outdoor: 50,000; Striped Parking Area: 9,600 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	99.00	43.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2024**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8600e-003	0.0197	0.0144	4.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561
Total	1.8600e-003	0.0197	0.0144	4.0000e-005	2.3900e-003	7.5000e-004	3.1400e-003	2.6000e-004	6.9000e-004	9.5000e-004	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0752	0.0752	0.0000	0.0000	0.0758
Total	3.0000e-005	2.0000e-005	2.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0752	0.0752	0.0000	0.0000	0.0758

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	1.9600e-003	0.0178	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561
Total	4.5000e-004	1.9600e-003	0.0178	4.0000e-005	2.3900e-003	6.0000e-005	2.4500e-003	2.6000e-004	6.0000e-005	3.2000e-004	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561

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3.2 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0752	0.0752	0.0000	0.0000	0.0758
Total	3.0000e-005	2.0000e-005	2.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0752	0.0752	0.0000	0.0000	0.0758

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-003	0.0415	0.0261	6.0000e-005		1.7200e-003	1.7200e-003		1.5800e-003	1.5800e-003	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750
Total	3.9000e-003	0.0415	0.0261	6.0000e-005	0.0213	1.7200e-003	0.0230	0.0103	1.5800e-003	0.0119	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750

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3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	6.4000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1879	0.1879	1.0000e-005	0.0000	0.1895
Total	8.0000e-005	5.0000e-005	6.4000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1879	0.1879	1.0000e-005	0.0000	0.1895

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6000e-004	3.2800e-003	0.0327	6.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750
Total	7.6000e-004	3.2800e-003	0.0327	6.0000e-005	0.0213	1.0000e-004	0.0214	0.0103	1.0000e-004	0.0104	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.3 Grading - 2024****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	6.4000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1879	0.1879	1.0000e-005	0.0000	0.1895
Total	8.0000e-005	5.0000e-005	6.4000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1879	0.1879	1.0000e-005	0.0000	0.1895

3.4 Building Construction - 2024**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1142	0.9169	1.0082	1.7900e-003		0.0385	0.0385		0.0368	0.0368	0.0000	148.5155	148.5155	0.0277	0.0000	149.2070
Total	0.1142	0.9169	1.0082	1.7900e-003		0.0385	0.0385		0.0368	0.0368	0.0000	148.5155	148.5155	0.0277	0.0000	149.2070

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2024****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4700e-003	0.1356	0.0470	6.2000e-004	0.0204	8.1000e-004	0.0212	5.8900e-003	7.7000e-004	6.6700e-003	0.0000	60.6155	60.6155	1.9100e-003	8.7800e-003	63.2802
Worker	0.0180	0.0119	0.1514	4.7000e-004	0.0568	3.0000e-004	0.0571	0.0151	2.7000e-004	0.0154	0.0000	44.3400	44.3400	1.2100e-003	1.1700e-003	44.7192
Total	0.0215	0.1475	0.1984	1.0900e-003	0.0772	1.1100e-003	0.0783	0.0210	1.0400e-003	0.0220	0.0000	104.9554	104.9554	3.1200e-003	9.9500e-003	107.9994

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0236	0.2767	1.0679	1.7900e-003		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003	0.0000	148.5153	148.5153	0.0277	0.0000	149.2068
Total	0.0236	0.2767	1.0679	1.7900e-003		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003	0.0000	148.5153	148.5153	0.0277	0.0000	149.2068

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Building Construction - 2024****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4700e-003	0.1356	0.0470	6.2000e-004	0.0204	8.1000e-004	0.0212	5.8900e-003	7.7000e-004	6.6700e-003	0.0000	60.6155	60.6155	1.9100e-003	8.7800e-003	63.2802
Worker	0.0180	0.0119	0.1514	4.7000e-004	0.0568	3.0000e-004	0.0571	0.0151	2.7000e-004	0.0154	0.0000	44.3400	44.3400	1.2100e-003	1.1700e-003	44.7192
Total	0.0215	0.1475	0.1984	1.0900e-003	0.0772	1.1100e-003	0.0783	0.0210	1.0400e-003	0.0220	0.0000	104.9554	104.9554	3.1200e-003	9.9500e-003	107.9994

3.4 Building Construction - 2025**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0574	0.4629	0.5393	9.6000e-004		0.0181	0.0181		0.0173	0.0173	0.0000	79.9781	79.9781	0.0147	0.0000	80.3448
Total	0.0574	0.4629	0.5393	9.6000e-004		0.0181	0.0181		0.0173	0.0173	0.0000	79.9781	79.9781	0.0147	0.0000	80.3448

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8100e-003	0.0723	0.0249	3.3000e-004	0.0110	4.3000e-004	0.0114	3.1700e-003	4.2000e-004	3.5900e-003	0.0000	32.0169	32.0169	1.0500e-003	4.6400e-003	33.4248
Worker	9.1400e-003	5.8100e-003	0.0766	2.5000e-004	0.0306	1.5000e-004	0.0307	8.1200e-003	1.4000e-004	8.2600e-003	0.0000	23.2922	23.2922	6.0000e-004	5.9000e-004	23.4835
Total	0.0110	0.0781	0.1015	5.8000e-004	0.0416	5.8000e-004	0.0422	0.0113	5.6000e-004	0.0119	0.0000	55.3092	55.3092	1.6500e-003	5.2300e-003	56.9083

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0127	0.1490	0.5750	9.6000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	79.9780	79.9780	0.0147	0.0000	80.3447
Total	0.0127	0.1490	0.5750	9.6000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	79.9780	79.9780	0.0147	0.0000	80.3447

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3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8100e-003	0.0723	0.0249	3.3000e-004	0.0110	4.3000e-004	0.0114	3.1700e-003	4.2000e-004	3.5900e-003	0.0000	32.0169	32.0169	1.0500e-003	4.6400e-003	33.4248
Worker	9.1400e-003	5.8100e-003	0.0766	2.5000e-004	0.0306	1.5000e-004	0.0307	8.1200e-003	1.4000e-004	8.2600e-003	0.0000	23.2922	23.2922	6.0000e-004	5.9000e-004	23.4835
Total	0.0110	0.0781	0.1015	5.8000e-004	0.0416	5.8000e-004	0.0422	0.0113	5.6000e-004	0.0119	0.0000	55.3092	55.3092	1.6500e-003	5.2300e-003	56.9083

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9700e-003	0.0287	0.0457	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	6.1572	6.1572	1.9900e-003	0.0000	6.2070
Paving	1.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.7400e-003	0.0287	0.0457	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	6.1572	6.1572	1.9900e-003	0.0000	6.2070

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.5 Paving - 2025****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3056	0.3056	1.0000e-005	1.0000e-005	0.3081
Total	1.2000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3056	0.3056	1.0000e-005	1.0000e-005	0.3081

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.6000e-004	3.7400e-003	0.0532	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	6.1572	6.1572	1.9900e-003	0.0000	6.2070
Paving	1.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.6300e-003	3.7400e-003	0.0532	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	6.1572	6.1572	1.9900e-003	0.0000	6.2070

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3056	0.3056	1.0000e-005	1.0000e-005	0.3081
Total	1.2000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3056	0.3056	1.0000e-005	1.0000e-005	0.3081

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4858					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4200e-003	0.0229	0.0362	6.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135
Total	0.4892	0.0229	0.0362	6.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135

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3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6000e-004	6.1000e-004	8.0300e-003	3.0000e-005	3.2100e-003	2.0000e-005	3.2200e-003	8.5000e-004	1.0000e-005	8.7000e-004	0.0000	2.4444	2.4444	6.0000e-005	6.0000e-005	2.4645
Total	9.6000e-004	6.1000e-004	8.0300e-003	3.0000e-005	3.2100e-003	2.0000e-005	3.2200e-003	8.5000e-004	1.0000e-005	8.7000e-004	0.0000	2.4444	2.4444	6.0000e-005	6.0000e-005	2.4645

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4858					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9000e-004	2.5800e-003	0.0367	6.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135
Total	0.4863	2.5800e-003	0.0367	6.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.6 Architectural Coating - 2025****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6000e-004	6.1000e-004	8.0300e-003	3.0000e-005	3.2100e-003	2.0000e-005	3.2200e-003	8.5000e-004	1.0000e-005	8.7000e-004	0.0000	2.4444	2.4444	6.0000e-005	6.0000e-005	2.4645
Total	9.6000e-004	6.1000e-004	8.0300e-003	3.0000e-005	3.2100e-003	2.0000e-005	3.2200e-003	8.5000e-004	1.0000e-005	8.7000e-004	0.0000	2.4444	2.4444	6.0000e-005	6.0000e-005	2.4645

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6634	0.5846	5.3967	0.0101	1.2453	7.3500e-003	1.2526	0.3323	6.8500e-003	0.3392	0.0000	983.0128	983.0128	0.0794	0.0491	999.6138
Unmitigated	0.6634	0.5846	5.3967	0.0101	1.2453	7.3500e-003	1.2526	0.3323	6.8500e-003	0.3392	0.0000	983.0128	983.0128	0.0794	0.0491	999.6138

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	1,800.00	1,800.00	1800.00	2,895,001	2,895,001
Parking Lot	0.00	0.00	0.00		
Strip Mall	400.00	400.00	400.00	434,616	434,616
Total	2,200.00	2,200.00	2,200.00	3,329,617	3,329,617

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	5.40	5.40	5.40	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	5.40	5.40	5.40	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
General Office Building	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Parking Lot	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Strip Mall	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	270.7871	270.7871	0.0168	1.6800e-003	271.7077
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	270.7871	270.7871	0.0168	1.6800e-003	271.7077
NaturalGas Mitigated	9.8400e-003	0.0895	0.0751	5.4000e-004		6.8000e-003	6.8000e-003		6.8000e-003	6.8000e-003	0.0000	97.3836	97.3836	1.8700e-003	1.7900e-003	97.9623
NaturalGas Unmitigated	9.8400e-003	0.0895	0.0751	5.4000e-004		6.8000e-003	6.8000e-003		6.8000e-003	6.8000e-003	0.0000	97.3836	97.3836	1.8700e-003	1.7900e-003	97.9623

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.8027e+006	9.7200e-003	0.0884	0.0742	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.1989	96.1989	1.8400e-003	1.7600e-003	96.7706
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	22200	1.2000e-004	1.0900e-003	9.1000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1847	1.1847	2.0000e-005	2.0000e-005	1.1917
Total		9.8400e-003	0.0895	0.0751	5.4000e-004		6.8000e-003	6.8000e-003		6.8000e-003	6.8000e-003	0.0000	97.3836	97.3836	1.8600e-003	1.7800e-003	97.9623

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.8027e+006	9.7200e-003	0.0884	0.0742	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.1989	96.1989	1.8400e-003	1.7600e-003	96.7706
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	22200	1.2000e-004	1.0900e-003	9.1000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1847	1.1847	2.0000e-005	2.0000e-005	1.1917
Total		9.8400e-003	0.0895	0.0751	5.4000e-004		6.8000e-003	6.8000e-003		6.8000e-003	6.8000e-003	0.0000	97.3836	97.3836	1.8600e-003	1.7800e-003	97.9623

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	544000	79.5486	4.9400e- 003	4.9000e- 004	79.8191
General Office Building	1.1646e +006	170.2984	0.0106	1.0600e- 003	170.8774
Parking Lot	21000	3.0708	1.9000e- 004	2.0000e- 005	3.0813
Strip Mall	122200	17.8692	1.1100e- 003	1.1000e- 004	17.9300
Total		270.7871	0.0168	1.6800e- 003	271.7077

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	544000	79.5486	4.9400e-003	4.9000e-004	79.8191
General Office Building	1.1646e+006	170.2984	0.0106	1.0600e-003	170.8774
Parking Lot	21000	3.0708	1.9000e-004	2.0000e-005	3.0813
Strip Mall	122200	17.8692	1.1100e-003	1.1000e-004	17.9300
Total		270.7871	0.0168	1.6800e-003	271.7077

6.0 Area Detail**6.1 Mitigation Measures Area**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4499	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Unmitigated	0.4499	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0486					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4009					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Total	0.4499	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0486					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4009					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Total	0.4499	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	53.8427	0.5484	0.0132	71.4793
Unmitigated	53.8427	0.5484	0.0132	71.4793

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	15.996 / 9.80402	51.4597	0.5241	0.0126	68.3158
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.740725 / 0.453993	2.3829	0.0243	5.8000e-004	3.1635
Total		53.8427	0.5484	0.0132	71.4793

Capalina 90KSF Office 10 KSF Retail GP Buildout Operational Year 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	15.996 / 9.80402	51.4597	0.5241	0.0126	68.3158
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.740725 / 0.453993	2.3829	0.0243	5.8000e-004	3.1635
Total		53.8427	0.5484	0.0132	71.4793

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Capalina 90KSF Office 10 KSF Retail GP Buildout Operational Year 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.1218	1.1301	0.0000	47.3733
Unmitigated	19.1218	1.1301	0.0000	47.3733

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	83.7	16.9903	1.0041	0.0000	42.0929
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	10.5	2.1314	0.1260	0.0000	5.2805
Total		19.1218	1.1301	0.0000	47.3733

Capalina 90KSF Office 10 KSF Retail GP Buildout Operational Year 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	83.7	16.9903	1.0041	0.0000	42.0929
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	10.5	2.1314	0.1260	0.0000	5.2805
Total		19.1218	1.1301	0.0000	47.3733

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Capalina 90KSF Office 10 KSF Retail GP Buildout Operational Year 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number
----------------	--------

11.0 Vegetation

ATTACHMENT C

EMFAC – VMT per Trip Calculation

EMFAC2014 (v1.0.7) Emission Rates

Region Type: County

Region: San Diego

Calendar Year: 2025

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips and DIURN

Region	CalYr	VehClass	MdIYr	Speed	Fuel	Population	VMT	Trips
San Diego	2025	HHDT	Aggregated	Aggregated	GAS	161.1216337	21202.37807	3223.721647
San Diego	2025	HHDT	Aggregated	Aggregated	DSL	15341.84567	2103842.221	0
San Diego	2025	LDA	Aggregated	Aggregated	GAS	1430879.21	47587916.84	9062515.432
San Diego	2025	LDA	Aggregated	Aggregated	DSL	18230.05635	610522.5588	114299.8171
San Diego	2025	LDA	Aggregated	Aggregated	ELEC	102949.8741	4362999.303	668758.3291
San Diego	2025	LDT1	Aggregated	Aggregated	GAS	110056.6214	3351787.675	665740.3764
San Diego	2025	LDT1	Aggregated	Aggregated	DSL	135.5653413	2803.107134	658.3286144
San Diego	2025	LDT1	Aggregated	Aggregated	ELEC	41.86046771	1338.281949	253.6785286
San Diego	2025	LDT2	Aggregated	Aggregated	GAS	445728.9448	15377108.99	2820576.047
San Diego	2025	LDT2	Aggregated	Aggregated	DSL	944.5915358	33384.93915	6012.222933
San Diego	2025	LHDT1	Aggregated	Aggregated	GAS	17137.47188	468069.7958	255322.7962
San Diego	2025	LHDT1	Aggregated	Aggregated	DSL	23103.06152	724642.3549	290607.4503
San Diego	2025	LHDT2	Aggregated	Aggregated	GAS	4048.832368	139572.0706	60321.56952
San Diego	2025	LHDT2	Aggregated	Aggregated	DSL	8965.43705	322602.574	112773.9196
San Diego	2025	MCY	Aggregated	Aggregated	GAS	70674.39783	501031.3352	141334.6608
San Diego	2025	MDV	Aggregated	Aggregated	GAS	267677.4564	8534402.663	1665093.779
San Diego	2025	MDV	Aggregated	Aggregated	DSL	5742.887036	206955.8564	36633.47691
San Diego	2025	MH	Aggregated	Aggregated	GAS	8633.503985	64191.89208	863.6957387
San Diego	2025	MH	Aggregated	Aggregated	DSL	2309.531209	17748.26353	230.9531209
San Diego	2025	MHDT	Aggregated	Aggregated	GAS	3092.563169	161145.5943	61876.00388
San Diego	2025	MHDT	Aggregated	Aggregated	DSL	25605.17262	1301919.202	0
San Diego	2025	OBUS	Aggregated	Aggregated	GAS	1716.976671	92464.33544	34353.26924
San Diego	2025	OBUS	Aggregated	Aggregated	DSL	935.0309742	73876.47022	0
San Diego	2025	SBUS	Aggregated	Aggregated	GAS	438.5086625	19991.26012	1754.03465
San Diego	2025	SBUS	Aggregated	Aggregated	DSL	1213.170137	45957.63464	0
San Diego	2025	UBUS	Aggregated	Aggregated	GAS	472.4052031	63912.54677	1889.620812
San Diego	2025	UBUS	Aggregated	Aggregated	DSL	690.1969245	93377.97918	2760.787698
Total							86284768.12	16007853.97
Total VMT/Trip							5.390152126	

ATTACHMENT D

CAP Consistency Review Checklist



CLIMATE ACTION PLAN CONSISTENCY REVIEW CHECKLIST

INTRODUCTION

The City of San Marcos (City) adopted an updated Climate Action Plan (CAP) in December, 2020. The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State greenhouse gas (GHG) emissions reduction targets. The purpose of the CAP Consistency Checklist (Checklist), in conjunction with the CAP, is to provide a streamlined review process for all proposed development projects that are subject to discretionary review and/or trigger environmental review pursuant to the California Environmental Quality Act (CEQA).

Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The City's CAP is a qualified greenhouse gas (GHG) emissions reduction plan in accordance with State CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of a CAP.

The purpose of this Checklist is to implement GHG reduction measures from the CAP that apply to new discretionary development projects. New development would demonstrate consistency with relevant CAP strategies and would not conflict with the City's ability to achieve the identified GHG reduction targets through implementation of applicable measures. Projects that are consistent with the CAP, as determined through the use of this Checklist, may rely on the CAP for the cumulative impact analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. Cumulative GHG impacts would be significant for any project that is not consistent with the CAP.

This Checklist may be updated periodically to incorporate new GHG reduction techniques or to comply with later amendments to the CAP or local, State, or federal law. Comprehensive updates to this Checklist will be coordinated with each CAP update. Administrative updates to the Checklist may occur regularly, as necessary for the purpose of keeping the Checklist up-to-date and implementable. Updates to the CAP Checklist associated with an update to the City's CAP would also require City Council approval and shall comply with CEQA.



APPLICABILITY AND PROCEDURES

This Checklist is required only for discretionary projects¹ that are subject to and not exempt from CEQA. Projects that are exempt from CEQA are deemed to be consistent with the City's CAP, and no further review is necessary, with the exception of a Class 32 "In-Fill Development Projects" categorical exemption (State CEQA Guidelines Section 15332), for which projects are required to demonstrate consistency with the CAP through this Checklist.

General procedures for Checklist compliance and review are described below. Specific guidance is also provided under each of the questions under Steps 1 and 2 of the Checklist.

- The City's Development Services - Planning Division reviews development applications and makes determinations regarding environmental review requirements under CEQA.
- The specific applicable requirements outlined in the Checklist shall be required as conditions of project approval.
- The project must provide written documentation and supporting evidence that demonstrate how the proposed project would implement each applicable Checklist requirement described herein to the satisfaction of the Planning Division.
- If a question in the Checklist is deemed not applicable (N/A) to a project, written documentation and evidence supporting that conclusion shall be provided to the satisfaction of the Planning Division. Each Checklist question provides the scenario(s) where checking N/A may be acceptable. If a measure is deemed not applicable for reasons other than those outlined in each question, supporting evidence will need to be provided and would be subject to Planning Division approval. A project may be determined to be inconsistent with the CAP if the N/A response is deemed to be not supported by credible evidence.
- Development projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist shall prepare a separate, project-level GHG analysis as part of the CEQA document prepared for the project.

¹ In this context, a project is any action that meets the definition of a "Project" in Section 15378 of the State CEQA Guidelines.

Application Information

Contact Information

Project No. and Name: IM22-0007 (Capalina Apartments)
 Property Address and APN: Capalina Road, San Marcos, CA 92069
 Applicant Name and Co.: Jon Rilling, Capalina SMA, LLC
 Contact Phone: (760) 445-5144 Contact Email: jrilling09@gmail.com

Was a consultant retained to complete this checklist? ☒ Yes ☐ No

If Yes, complete the following:

Consultant Name: Matt Simmons Contact Phone: (760) 484-8832
 Company Name: Consultants Collaborative Contact Email: matt@cciconnect.com

Project Information

1. What is the size of the project site (acres)? 2.51 Acres
2. Identify all applicable proposed land uses:
 - ☐ Residential (indicate # of single-family dwelling units): _____
 - ☒ Residential (indicate # of multi-family dwelling units): 119 Units
 - ☒ Commercial (indicate total square footage): 4,000 sf
 - ☐ Industrial (indicate total square footage): _____
 - ☐ Other (describe): _____

3. Provide a description of the project proposed. This description should match the basic project description used for the CEQA document. The description may be attached to the Checklist if there are space constraints.

Proposal to rezone the current site from MU-3 to MU-2, to allow for a mix of 119 Multifamily Apartment Units and

approximately 4,000 sf of ground floor commercial. The project will utilize the State's Density Bonus law to

achieve a density of 47 units per acre, with a maximum of 4-stories. The project will utilize two of the State Density

Bonus Incentives by including six affordable units (set-aside for occupants that make between 30%-50% of AMI).

The remaining units will be market rate units. The Project will utilize the State incentives for parking.

The Project is 0.6 miles from a transit station, is within a low regional VMT area, and within the SANDAG smart growth area.



STEP 1: LAND USE CONSISTENCY

The first step in this section evaluates a project's GHG emissions consistent with the City's *Guidance to Demonstrating Consistency with the City of San Marcos Climate Action Plan: For Discretionary Projects Subject to CEQA* (Guidance Document). New discretionary development projects subject to CEQA review that emit fewer than 500 metric tons of carbon dioxide equivalent (MTCO₂e) annually would not contribute considerably to cumulative climate change impacts as stated in the City's Guidance Document, and therefore, would be considered consistent with the CAP and associated emissions projections.

For projects that are subject to CAP consistency review, the next step in determining consistency is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the city to determine a project's consistency with the land use assumptions used in the CAP.

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Step 1: Land Use Consistency

Checklist Item

(Check the appropriate box and provide an explanation and supporting documentation for your answer)

Yes

No

1. The size and type of projects listed below would emit fewer than 500 MTCO₂e per year. Based on this threshold, does the proposed project exceed these characteristics? ▪ <u>Single Family Housing</u>: 36 dwelling units ▪ <u>Multi-Family Housing</u>: 55 dwelling units ▪ <u>Office</u>: 43,000 square feet ▪ <u>Commercial Space</u>: 20,000 square feet ▪ <u>Regional Shopping Center</u>: 18,000 square feet ▪ <u>Hotel</u>: 37 rooms ▪ <u>Restaurant (Sit-Down)</u>: 6,500 square feet ▪ <u>Restaurant (Drive-Thru, High Turnover)</u>: 2,400 square feet ▪ <u>General Light Industrial</u>: 58,000 square feet ▪ <u>University</u>: 263 students ▪ <u>Mixed-Use</u>: See <i>Guidance to Demonstrating Consistency</i> memorandum for methods to estimate mixed-use development thresholds ▪ <u>Other</u>: For project types not listed in this section the need for GHG analysis and mitigation will be made on a project-specific basis, considering the 500 MTCO₂e per year screening threshold. If “Yes”, proceed to Question 2 of Step 1. If “No”, in accordance with the City’s CAP screening criteria, the project’s GHG impact is less than significant and is not subject to the measures of the CAP.	☒	☐
2. Is the proposed project consistent with the City’s existing General Plan land use designation? If “Yes”, proceed to Step 2. If “No”, proceed to Question 3 of Step 1	☐	☒
3. For projects not consistent with the existing General Plan land use designation, does the project include a General Plan Amendment that would generate GHG emissions equal to or less than estimated emissions generated under the existing designation? If “Yes”, proceed to Step 2 and provide estimated project emissions under both existing and proposed designation(s) for comparison. If “No”, the project’s GHG impact is potentially significant, and a GHG analysis must be prepared in accordance with the City’s Guidance Document and applicable CEQA guidelines. The project must incorporate each of the measures identified in Step 2 to mitigate cumulative GHG emissions impacts, along with	☒	☐



other mitigation measures as necessary based on a project specific GHG analysis.. Proceed and complete a project specific GHG analysis, and Step 2 of the Checklist.		
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STEP 2: CAP MEASURES CONSISTENCY

The second step of CAP consistency review is to evaluate a project’s consistency with the applicable strategies and measures of the CAP. Each Checklist item is associated with a specific GHG reduction measure in the City’s CAP. “N/A” should only be checked based on the direction provided in each Checklist Item question. All projects for which the measure is applicable must demonstrate that they would implement measures consistent with the Checklist Item, or fully substantiate how the item would be infeasible for project implementation. “N/A” responses are subject to Planning Division review and approval. If “No” is provided as a response to a question, the project would be determined to be inconsistent with the CAP and result in a significant GHG impact.

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**Step 2: CAP Measures Consistency****Checklist Item**

(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)

Yes**No****N/A****Project Design****1. Electric Vehicle Charging Stations (Measure T-2)**

Multi-Family Residential and Non-Residential: Will the project install electric vehicle charging stations (Level 2 or better) in at least five percent of the total parking spaces provided on-site?

☒☐☐

Check "N/A" if the project is a single-family residential project or would not provide any parking.

Please substantiate how the project satisfies question 1:

The project will comply with Measure T-2. The project include 147 parking space (142 spaces for residential and 5 spaces for commercial). The project design includes 8 parking spaces with Level 2 EV chargers, 15 EV-capable spaces and 35 EV-ready spaces.

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2. Bicycle Infrastructure (Measure T-8)

Residential and Non-Residential Projects: If the following conditions are met, would the project pay its fair-share contribution to bicycle infrastructure improvements?

- ☐ Intersection or roadway segment improvements are proposed as part of the project and,
- ☐ The City's General Plan Mobility Element identifies bicycle infrastructure improvements at any intersection(s) or roadway segment(s) that would be improved as part of the project.

☐☐☒

Check "N/A" if the conditions above would not be met.



Step 2: CAP Measures Consistency

Checklist Item

(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)

Yes

No

N/A

Please substantiate how the project satisfies question 2:

Not Applicable: The project site is located on the Mission Road corridor which has a bicycle lane that transitions to a sharrow lane along the project's northern frontage. The project design would not impact the bicycle lanes along Mission Road. The City's General Plan Mobility Element (Figure 3-4) does not identify any bicycle infrastructure for Capalina Road, which is the project's southern border

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Step 2: CAP Measures Consistency			
Checklist Item (Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)	Yes	No	N/A
3. Transportation Demand Management (Measure T-9) <u>Multi-Family Residential and Non-Residential:</u> Will the project develop and implement a TDM plan that includes, at a minimum, all of the TDM strategies listed below? ☒ Provide discounted monthly transit pass or provide at least 25 percent transit fare subsidy to residents/employees. ☒ Provide designated car-share, carpool, vanpool, and/or park-and-ride parking spaces.² ☒ Provide pedestrian connections between all internal uses and to all existing or planned external streets around the project site(s). ☒ Provide secure bicycle parking spaces or bicycle racks, showers, and clothes lockers. ☒ Encourage telecommuting for employees (allow one telecommute day per week or compressed work weeks) or provide a telecommute work center with common office space and equipment available to residents. -or- Would the project implement and monitor for four (4) years a TDM program that demonstrates an alternative transportation (i.e. carpool, public transit, bicycle, walk, telecommute) mode share of at least 29 percent ³ for all residents? Check “N/A” if the project is a single-family residential project or is not subject to the City’s TDM Ordinance.	☒	☐	☐

² The designated number of car-share, carpool, vanpool, and/or park-and-ride parking spaces provided at a rate equal to or greater than CALGreen minimum requirements.

³ Measure T-10 requires projects to increase alternative mode share by seven percent. The baseline mode share for alternative transportation (i.e. carpool, public transit, bicycle, walk, and telecommute) is 22 percent based on 2010 Census Data.



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Step 2: CAP Measures Consistency

Checklist Item

(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)

Yes

No

N/A

Please state which measure option the project for which the project would comply and substantiate how the project satisfies question 3:

The project will comply with Measure T-9. The property manager will provide transit information to the owners and make a good faith effort in offering discounted transit fares. There will be some parking space for carpool and bicycle racks onsite. The community room will have some spaces available for residents to telecommute. The property management company will provide a newsletter to inform the residents there are options for reduced transit passes. The project will provide designated car-share, carpool, vanpool, EV and/or park-and-ride spaces on site. Each apartment is equipped with showers and storage as well as areas within the home for telecommuting. Additionally, the project will have common office space as part of the commercial portion that will promote telecommuting. Adjacent to the fitness center, as part of the onsite restrooms, a shower and 2 sets of bike racks will be provided onsite.

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4. Reduce Parking Near Transit (Measure T-12)

Multi-Family Residential: If located within a half-mile of a major transit stop⁴, would the project provide at least 27 percent fewer parking spaces than required for the same use based on the City's municipal code parking requirements?

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Check "N/A" if the project is a single-family residential or non-residential project.

⁴ Major transit stop is defined as a bus or light-rail station with fixed service and 10-minute minimum headways during peak hours. Project applicants should confirm with City staff if the project site would fall within this proximity to a major transit stop.

**Step 2: CAP Measures Consistency****Checklist Item**

(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)

Yes**No****N/A**

Please substantiate how the project satisfies question 4:

Not Applicable: The project site is located more than a half-mile from a major transit stop.

5. Water Heaters (Measure E-1)

Residential: Will the project install one of, or a combination of, the following water heater types in place of natural gas water heaters?

- ☒ Electric heat pump water heater
- ☐ Instantaneous electric water heater
- ☒ Electric tank
- ☐ Solar water heater with heat pump water heater backup
- ☐ Solar water heater with electric tank backup

☒☐☐

Check "N/A" if the project is a non-residential project.

Please substantiate how the project satisfies question 5:

The project will comply with Measure E-1. The project will install electric heat pump water heaters with an electric tank.

6. Photovoltaic Installation (Measure E-2)

Non-Residential: Will the project install photovoltaic systems with a minimum capacity of two watts per square foot of gross floor area?

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Check "N/A" if the project is a residential project or if installation of on-site photovoltaic would be infeasible.



Step 2: CAP Measures Consistency

Checklist Item

(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)

Yes

No

N/A

Please substantiate how the project satisfies question 6:

The project will comply with Measure E-2. The project will install Photovoltaic systems with a capacity of two watts per sqf of gross floor area.

7. Landscaping Water Use (Measure W-1)

Residential and Non-Residential: Will the project comply with the City's Water Efficient Landscape Ordinance?⁵

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Check "N/A" if the project is not proposing any landscaping or is not subject to the City's Water Efficient Landscape Ordinance.

Please substantiate how the project satisfies question 7:

The project will comply with Measures W-1. The project landscaping is designed to comply with WELO standards.

8. Urban Tree Canopy (Measure C-2)

Single-Family Residential: Will the project plant a minimum of one tree per single-family residential unit?

-or-

Multi-Family Residential and Non-Residential: If the project is providing more than 10 parking spaces, will the project plant at least one tree per five parking spaces provided?

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Check "N/A" if planting the required number of trees on-site would be infeasible.

⁵ City of San Marcos Landscape Manual: <https://www.san-marcos.net/home/showdocument?id=13984>



Step 2: CAP Measures Consistency			
Checklist Item	Yes	No	N/A
(Check the appropriate box and provide an explanation for your answer. Please use additional sheets if necessary)			

Please substantiate how the project satisfies question 8:
The project will comply with measure E-2. The project will provide 147 parking spaces which would require 30 trees. As proposed the project will be installing 83 trees on site.

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