

GLOBAL CLIMATE CHANGE

**Passerelle Horse Ranch Creek
County of San Diego, CA**

Lead Agency:

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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 Climate Action Registry General Reporting Protocol Version 3.1 (CCARGRPV3.1)

California Environmental Quality Act (CEQA)

Carbon Dioxide (CO₂)

Cubic Yards (CY)

Environmental Protection Agency (EPA)

Green House Gas (GHG)

International Residential Code (IRC)

Low Carbon Fuel Standard (LCFS)

Methane (CH₄)

Nitrous Oxide (N₂O)

San Diego Air Basin (SDAB)

San Diego Air Pollution Control District (SDAPCD)

South Coast Air Quality Management District (SCAQMD)

Senate Bill 97 (SB97)

Vehicle Miles Traveled (VMT)

EXECUTIVE SUMMARY

This analysis was prepared according to guidelines established within the California Global Warming Solutions Act of 2006 – Assembly Bill 32 (AB32), Senate Bill 97 (SB97), California Environmental Quality Act (CEQA). GHGs analyzed in this study are Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O). To simplify GHG calculations, both CH₄ and N₂O are converted to equivalent amounts of CO₂ and are identified as carbon dioxide equivalent (CO₂e).

The Passerelle Horse Ranch Creek project seeks to amend a small component of the 416.1 acre Campus Park Specific Plan (CPSP), located in the County of San Diego (County), to allow for the development of two multi-family condominium lots (Parcel 1 and Parcel 2) with 138 Unit Detached multi-family units and is considered in this analysis as the “Project”. Parcel 1, located on Assessor’s Parcel Number (APN) 108-120-62, is comprised of 3.02 acres and Parcel 2, located on APN 108-120-61, is comprised of 8.94 acres located at the northeast intersection of Interstate 15 (I-15) and State Route 76 (SR-76) within the Fallbrook Community Planning Area. The existing designation for professional office (PO-1 and PO-2) uses in the Specific Plan which could be developed with 157,000 SF of professional office space and is considered in this report as “General Plan Buildout” or “GP Buildout” of PO-1 and PO-2.

This analysis has been completed in order compare Greenhouse Gas (GHG) emissions from both the proposed 138-unit Detached multi-family residential development and an allowable General Plan (GP) buildout development to construct approximately 157,000 SF of professional office space.

All construction phases of the proposed Project are anticipated to start in 2022 and completion is expected in 2023 with full operations in 2024.

The proposed Project will emit GHGs directly through operations and construction and indirectly from offsite sources such as water conveyance and utilities. The proposed Project would generate approximately 2,241.67 Metric Tons (MT) of CO₂e each year starting in 2024 from operations and construction emissions which have been amortized over a 30 year duration per South Coast Air Quality Management Districts (SCAQMD) recommendations also utilized by the County combined.

The Approved GP buildout scenario construction has already commenced but some construction remains. The GHG emissions including the remaining amortized construction emissions would generate 3,197.29 MT CO₂e per year starting the same operational year as the proposed Project action (2025). Comparing operational emissions from the affected project site between the proposed Project and the GP Buildout operations shows the proposed Project would generate 1,147.96 MT CO₂e (3,197.29 MT CO₂e – 2,049.33 MT CO₂e) fewer emissions than the Approved GP Buildout. Since the proposed Project would generate fewer emissions than the Approved GP Buildout allows, the Project would generate less than significant GHG impacts. It should be noted

that the original CPSP requires all projects within the CPSP to include specific GHG mitigation measures identified in Table 4.3 of this report. These mitigation measures were not specifically applied within the modeling as the purpose of this report is to identify the relative difference between GHG emissions and show that the proposed Project would have a GHG intensity reduction as compared to the Approved GP buildout scenario.

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this GHG assessment is to provide documentation in support of the County's CEQA compliance requirement. The proposed Project's GHG emissions impacts are based on the recommendations provided in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.):

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

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

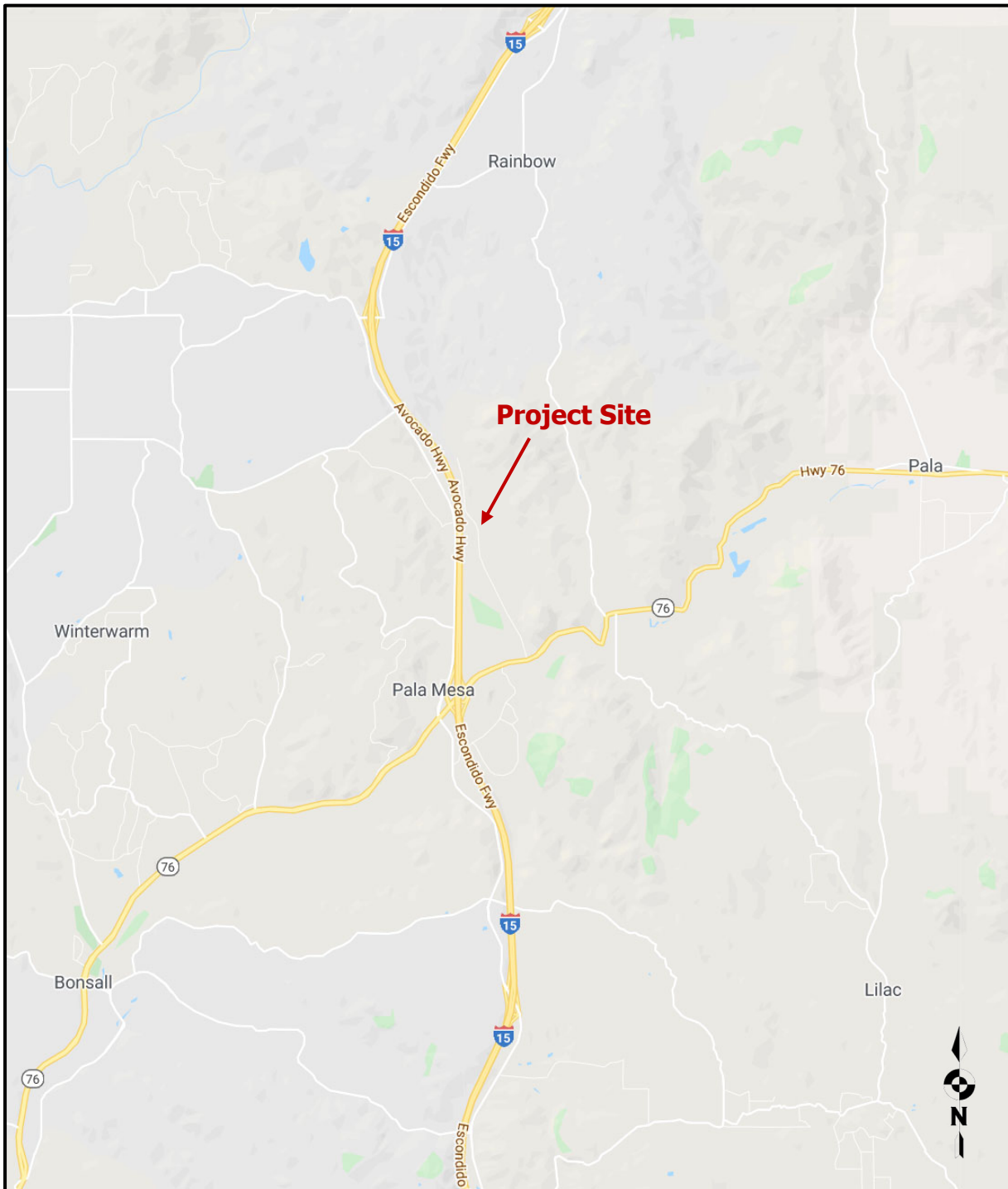
1.2 Project Location

The project is located at the northeast intersection of Interstate 15 (I-15) and State Route 76 (SR-76) within the Fallbrook Community Planning Area. The plan area is approximately two miles long from its northern to southern boundary, and 3,000 feet across at its widest point. The proposed Project would be located on Assessor's Parcel Number (APN) 108-120-62 which is comprised of 3.02 acres and Parcel 2, located on APN 108-120-61, which is comprised of 8.94 acres. A general Project vicinity map is shown in Figure 1-A.

1.3 Project Description

The CPSP project is a 416.1-acre planned community composed of multi-family and single-family residential neighborhoods, a neighborhood commercial town center, professional office uses, parks and recreational facilities, and preservation of open space areas and trails. A Specific Plan Amendment (SPA) and General Plan Amendment (GPA) were approved for the project on May 11, 2011, amending the previous Hewlett-Packard Campus Park Specific Plan of 1983 and the County of San Diego General Plan. The Environmental Impact Report (State Clearinghouse No. 2005011092), "Campus Park EIR", was certified by the County of San Diego Board of Supervisors on May 11, 2011 for the CPSP. The project seeks a new SPA to amend the CPSP to allow for the development of two detached multi-family projects (Parcel 1 and Parcel 2). The approved CPSP and the location of the proposed SPA Project location is shown in Figure 1-B. The proposed Project would require an SPA to modify the existing site designation from professional office (PO-1 and PO-2) to multi-family (MF). The approved office area for both parcel 1 and 2 could be developed with roughly 157,000 SF of professional office space. The proposed SPA modification would allow for the development of 138 Unit detached multi-family residential development. A total of 36 units would be provided on Parcel 1, and 102 units would be provided on the larger Parcel 2. A site development plan for each parcel is shown in Figure 1-C.

Figure 1-A: Project Vicinity Map



Source: (Google, 2020)

Figure 1-B: Proposed CPSP Modification Area

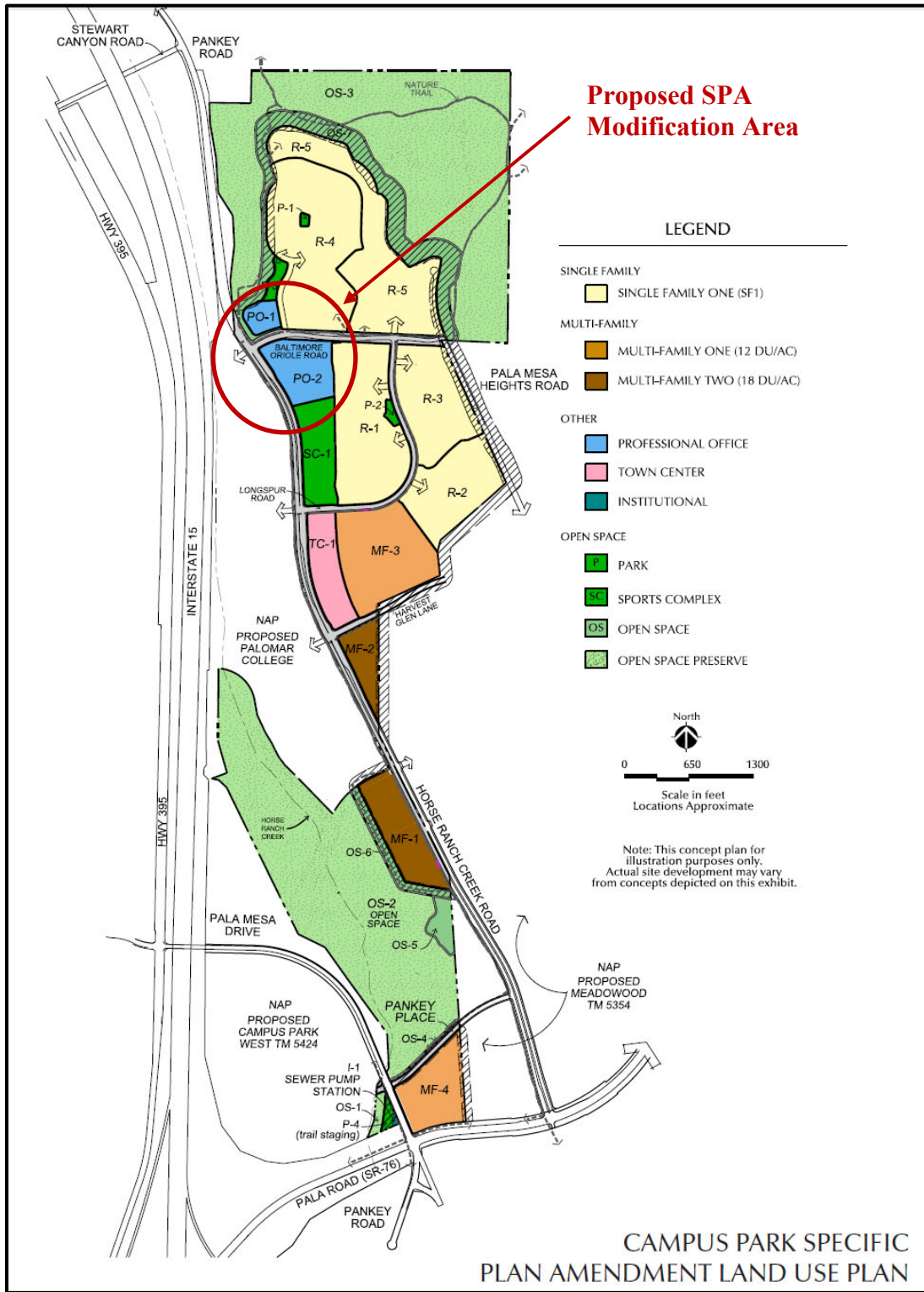
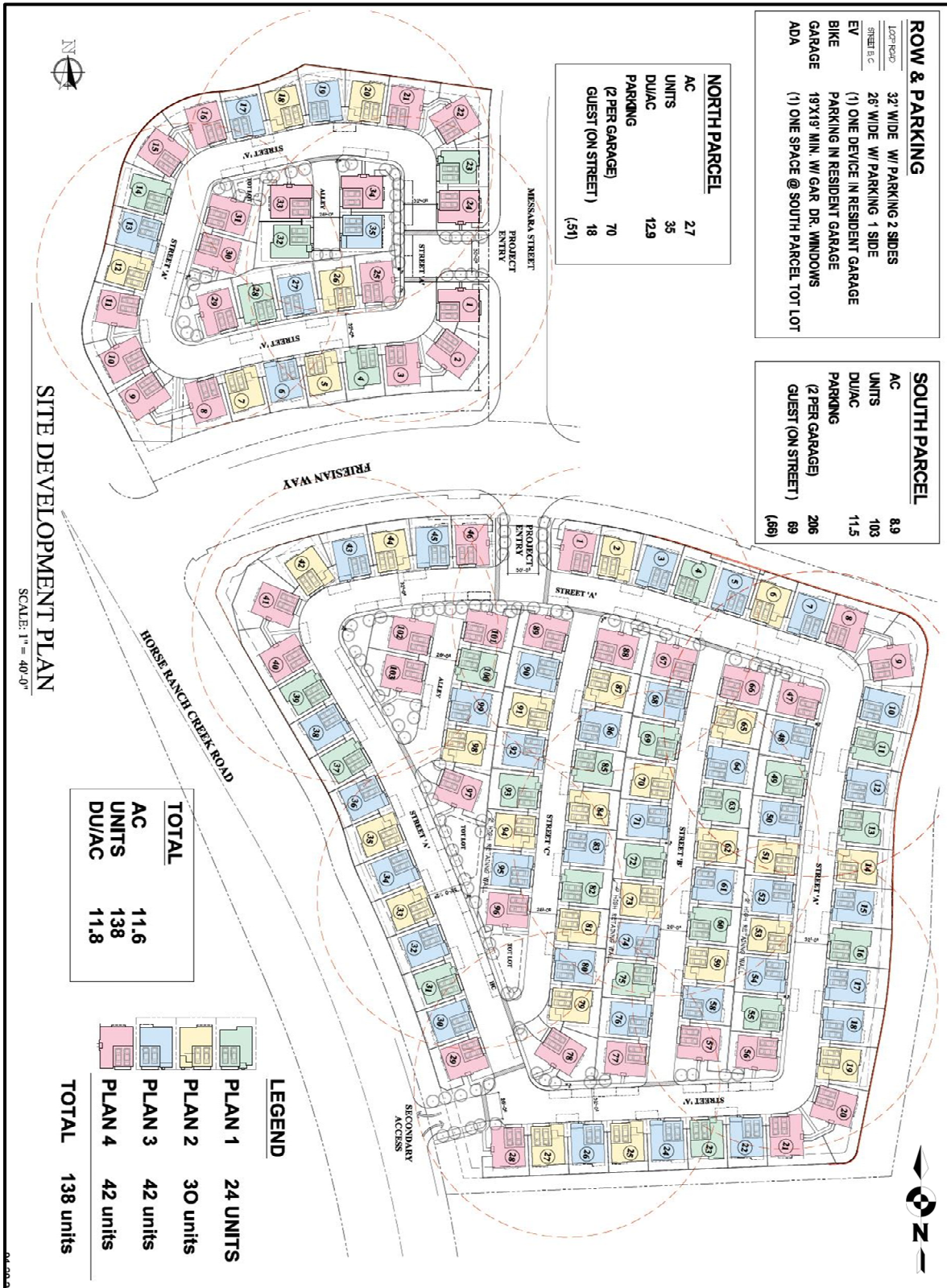


Figure 1-C: Proposed Project Site Layout



Source: (Bucilla Group Architecture Inc., 2022)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Understanding GHGs

GHGs such as water vapor and carbon dioxide are abundant in the earth's atmosphere. These gases are called "Greenhouse Gases" because they absorb and emit thermal infrared radiation which acts like an insulator to the planet. Without these gases, the earth's ambient temperature would either be extremely hot during the day or blistering cold at night. However, because these gases can both absorb and emit heat, the earth's temperature does not sway too far in either direction.

Over the years as human activities require the use of burning fossil fuels stored carbon is released into the air in the form of CO₂ and to a much lesser extent Carbon Monoxide (CO). Additionally, over the years scientist have measured this rise in Carbon Dioxide and the general consensus is that human activities contribute to the heating of the planet. Additionally, other GHGs such as Methane and Nitrous Oxide would contribute to global warming.

GHGs of concern as analyzed in this study are Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O). To simplify GHG calculations, both CH₄ and N₂O can be converted to an equivalent amount of CO₂ or CO₂e. CO₂e is calculated by multiplying the calculated levels of CH₄ and N₂O by a Global Warming Potential (GWP). The latest California Emissions Estimator Model (CalEEMod 2020.4.0) developed by Breeze Software uses the Intergovernmental Panel on Climate Change (IPCC) 2007 report as source data for GWP factors for both CH₄ and N₂O (CAPCOA, September 2016), using the 100-year period of 25 and 298, respectively (IPCC, 2007).

2.2 Climate

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 heat 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.

Meteorological trends within the Bonsall area generally show daytime highs ranging between 67°F in the winter to approximately 83°F in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 44°F in the winter to approximately 62°F in the summer. Precipitation is generally about 13 inches per year (WRCC, 2016). 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).

2.3 Existing Setting

The Passerelle Detached Multi-Family project is located directly east of I-15, approximately 0.1-mile, east of Horse Ranch Creek Road, and approximately 1.6 miles north of SR-76. Parcel 1 is bound to the west by Horse Ranch Creek Road, to the east by Jaeger Street and to the south by Friesian Way. An HOA recreational facility (P-3), common area open space (OS-7) and an open space preserve (OS-3) border Parcel 1 to the north. Single family residences (R-4 and R-5) border Parcel 1 to the east and northeast. R-4 and R-5 are further surrounded by common area open space and open space preserves. Parks (P-1 and P-6) are dispersed within R-4 and R-5. Further east, across I-15 are semi-rural residential land uses (SR-2). Friesian Way bisects Parcel 1 and Parcel 2.

Parcel 2 is bound to the north by Friesian Way and to the west by Horse Ranch Creek Road. To the east and southeast of Parcel 2 are single family residences (R-1, R-2 and R-3). The construction of these homes is complete or near completion. A parcel designated for a sports complex (SC-1) is located directly to the south, and further south of Parcel 2 is an area designated for a Town Center (TC-1). Multi-family residences (MF-1 and MF-2) to the southeast have been constructed as part of the existing development. Throughout R-1, R-2 and R-3 are designated park areas (P-2, P-5, P-7 and P-8). The Palomar College North Education Center is located further south of Parcel 2. The amendment from professional office uses to multi-family residential would be compatible with the existing Campus Park development.

The entire project area has been graded as part of the adjacent development and thus, contain little to no vegetation. Parcel 1 is predominantly flat, with elevations ranging from 370-375 feet above mean sea level (FAMSL) in a northerly direction. Landscaped slopes on its southern and western sides slope down to 355 FAMSL. Parcel 2 is also predominantly flat, sloping gently upward from 360-370 FAMSL in a northeasterly direction, with landscaped slopes on the northeast sloping up to 395 FAMSL, and landscaped slopes sloping down to 355 FAMSL on the western and northwestern sides. Soils underlying the areas are Wyman loams, five to nine percent slopes. Figure 2-A shows an aerial image of the site showing the graded lots as labeled.

Figure 2-A: Parcel Identification



Source: (Google Earth, 2020)

3.0 CLIMATE CHANGE REGULATORY ENVIRONMENT

3.1 Federal

Massachusetts v. EPA

On April 2, 2007, in *Massachusetts v. EPA*, the Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the federal Clean Air Act. On December 7, 2009, the EPA Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO₂, CH₄, N₂O, Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the “endangerment finding.”
- The Administrator further found the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the “cause or contribute finding.”

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

3.2 State

State Greenhouse Gas Targets

Executive Order S-3-05

Executive Order (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 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 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 relatedly 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 (Scoping Plan)* in accordance with Health and Safety Code Section 38561. The *Scoping Plan* established an overall framework for the measures that will 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. The key elements of the 2008 *Scoping Plan* include the following (CARB, 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
2. Achieving a statewide renewable energy mix of 33 percent.
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.

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.

6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

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 *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 (CARB, 2011). 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 is on track to meet the 2020 emissions reduction mandate established by AB 32, and 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.

In conjunction with the *First Update*, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050." Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and, (6) natural and working lands. The *First Update* identified key

recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

Based on CARB's research efforts presented in the *First Update*, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050." Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies.

As part of the *First Update*, CARB recalculated the state's 1990 emissions level using more recent global warming potentials identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO₂e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 percent or 16 percent) from the BAU conditions.

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan (Second Update)* for public review and comment (CARB, 2017). This update proposes CARB's strategy for achieving the state's 2030 GHG target as established in SB 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030², 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 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 *Second Update* states "[a]chieving no additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *Second Update* 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 *Second Update* in December 2017.

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.

AB 900

In 2011 the Governor of California signed AB 900 (Jobs and Economic Improvement Through Environmental Leadership Act of 2011) (State of California, 2011). AB 900 provides streamlined judicial review of Projects exceeding \$100 million which do not generate net additional emission greenhouse gasses. The bill would require, among other things, that the Project create high-wage, highly skilled jobs and not result in any net additional emission of greenhouse gases, including greenhouse gas emissions from employee transportation. Projects which meet these requirements are labeled "Leadership Projects" and would apply directly to the Governor for certification prior to any release of environmental documentation.

After a Project is receives approval from the Governor, if the Project receives any legal challenge, the Project would be litigated directly within the Court of Appeal bypassing any challenges at the superior court level which would ultimately streamline development and which in turn would stimulate Job Growth. AB 900 as written was to be in effect till January 1, 2015. AB 900 was amended by SB 743 (State of California, 2013), SB 734 (State of California, 2016) and AB 246 (California, 2017), which ultimately extend the streamline certification for most Projects through January 2020. AB 987 (State of California, 2018) was signed to extend the streamline process for a specific sports and entertainment Project within the City of Inglewood into 2025.

Based on review of the Governor's Office of Planning and Research website, 18 Projects have been submitted respect to the Project requirements to produce no net additional GHG emission including from employee transportation. Projects have achieved this requirement for both construction and operations through measures such as installing on-site solar panels, electric vehicle charging stations as well as through the purchase of renewable power and retirement of associated renewable energy credits as well as purchase of verifiable, permanent GHG offsets (State of California, 2019) as discussed in Section 3.3 of this report.

Similarly, the Newhall Ranch GHG mitigation plan was approved under CEQA review using various protocols and standards with GHG offsets. Also, the mitigation plan has bolstered the requirements for how GHG offset registry and the offsets they issue qualify as effective CEQA mitigation measures (Newhall Ranch, 2017).

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO 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

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).

EO B-55-18

In 2018, the Governor expanded upon EO S-3-05 by issuing Executive Order B-55-18 and creating a statewide goal of carbon neutrality by 2045. EO B-55-18 identifies the California Air Resources Board as the lead agency to develop a framework for implementation and progress tracking toward this goal. It should be noted that consistency with a statewide carbon neutrality target of 100% below 1990 levels by 2045 represents the Governor's policy goal, but is not required to make a significance determination. The state has already determined that 80% below 1990 levels by 2050 is a long-term target that represents California's share of emissions reductions to stabilize and limit global warming and "avoid dangerous climate change". EO B-30-15 sets forth the 2050 target endorsed by the

Intergovernmental Panel on Climate Change's finding and notes that the state's 2050 target will "attain a level of emissions necessary to avoid dangerous climate change" because it may limit global warming to 2 degrees Celsius by 2050.

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 2016 Title 24 standards, which went into effect on January 1, 2017, are the currently applicable standards. When comparing the 2013 and 2016 standards for electrical consumption, it is expected that low-rise, single-family detached homes and multi-family homes would use 12 percent and 15 percent less electricity under the 2016 standards, respectively. Similarly, implementation of the 2016 standards is expected to reduce natural gas consumption by 21 percent in single-family homes and 31 percent in multi-family homes. Newly constructed non-residential buildings are estimated to achieve a 5 percent reduction in electricity consumption under the 2016 standards and no significant change relative to natural gas consumption (California Energy Commission, 2015). The current version of CalEEMod used in this analysis employs, as a default parameter, the 2016 Title 24 standards to estimate GHG emissions.

The Project would be required, at a minimum, to comply with the latest version of Title 24 standards at the time the Project seeks building permits. This will likely be the 2019 standards, as those standards went into effect on January 1, 2020. The 2019 standards continue to improve upon the 2016 standards for residential and nonresidential buildings. One of the most notable changes in the 2019 standards is the requirement for the installation of rooftop solar on residential buildings (California Energy Commission, 2017). It should be noted that the State updates these regulations every three years. Thus,

throughout Project construction, buildings will need to comply with the most recently adopted standards.

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 2019 standards became effective on January 1, 2020 (California Title 24, Part 11, 2019). It should be noted that the Project would be required to use the latest CalGreen Standard at the time building permits are issued.

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; dishwashers; 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, Clean Car Standards - Pavley, Assembly Bill 1493, 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 target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. 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. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

In 2018, CARB extended and expanded the Low Carbon Fuel Standard regulations to include a 20 percent target for reduction in carbon intensity by 2030.

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 city's or county's 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. SANDAG is in the process of preparing its next SCS, which will consider whether and how the region could attain these reduction targets.

Safer Affordable Fuel-Efficient Vehicle Rule

In August 2019, the U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) jointly published a notice of the proposed rulemaking for the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule). The SAFE Vehicles Rule proposes amended Corporate Average Fuel Economy (CAFE) and Light-Duty Vehicle Greenhouse Gas Emissions Standards. This Notice of Proposed Rulemaking (NPRM) was the first formal step in setting the 2021-2026 Model Year (MY) standards that must be achieved by each automaker for its car and light-duty truck fleet (US EPA, 2018). Part One of the SAFE Rule withdrew the State of California's waiver, afforded under the CAA to set GHG and zero-emissions vehicle (ZEV) standards separate from the federal government and became effective in November 2019. In March

2020, Part Two of the SAFE Rule was published which set amended fuel economy and CO₂ standards for Passenger Cars and Light Trucks for model years 2021 through 2026. (US EPA, 2020).

The SAFE Rule relaxed federal greenhouse gas emissions and CAFE standards to increase in stringency at only about 1.5 percent (%) per year from model year (MY) 2020 levels over MYs 2021–2026. The previously established emission standards and related “augural” fuel economy standards would have achieved about 4% per year improvements through MY 2025.

CARB has prepared off-model adjustment factors for the Emissions Factors model (EMFAC) to account for the Final SAFE Rule. These adjustment factors account for changes in criteria pollutant estimates from mobile sources for NO₂, respirable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and carbon monoxide (CO). Similar adjustment factors were developed by CARB for CO₂ and are applied in this analysis automatically in modeling software.

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).

The Zero Emission Vehicle (ZEV) program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (PHEVs) in the 2018 to 2025 model years (California Air Resources Board, 2017). PHEVs contain both an internal combustion engine and an electric motor, which is powered by batteries. As defined by CARB, ZEVs includes PHEVs, Battery Electric Vehicles (BEV) and Fuel Cell Electric Vehicles (FCEV). The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market. In the context of this report, “EV” is used to refer to all types of electric, and low- or zero-emission vehicles.

As of the publication date of this report, FCEVs are not common in the San Diego region due to limited refueling capabilities. Based on information obtained from the California Fuel Cell Partnership, only one hydrogen fuel station (located in the City of Del Mar) exists in San Diego County. At this time, one station is planned for construction in the City of San Diego sometime in the future. (California Fuel Cell Partnership, 2017). Therefore, for purposes of this analysis, only BEVs and PHEVs are referenced when ZEVs are discussed. If FCEVs gain traction in San Diego, additional GHG reductions would be realized.

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. As of January 2018, the Governor has called for as many as 1.5 million EV by 2025 and up to five million EV by 2030 (Office of Governor Edmund G. Brown Jr., 2018).

AB 1236

AB 1236 (2015), as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that creates an expedited and streamlined permitting process for electric vehicle charging stations, as specified. In August 2016, the County Board of Supervisors adopted Ordinance No. 10437 adding a section to its County Code related to the expedited processing of electric vehicle charging stations permits consistent with AB 1236.

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 and 100 percent of electricity procured to serve all state agencies 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

In 1989, AB 939, 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, 2018). 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.

3.3 Local Regulations

County of San Diego General Plan

The County's General Plan Update (approved in 2011) provides smart growth and land use planning principles designed to reduce GHG emissions. GHG reduction policies are addressed within multiple elements of the General Plan Update. The strategies for reduction of GHG emissions in the General Plan Update include reducing vehicle miles traveled (VMT), energy consumption, water consumption and solid waste. The General Plan Update also discusses the increased generation and use of renewable energy sources to reduce non-renewable electrical and natural gas energy consumption.

A project's adherence to the County's General Plan can be determined through demonstrating consistency with General Plan land use assumption and policies. If a project would generate fewer GHG emissions than the maximum allowable buildout of the site under the General Plan land use designations, the project would have a less than significant GHG impacts. Further consistency with the General Plan can be demonstrated through compliance with applicable General Plan policies.

3.4 Framework for CEQA Analysis

Appendix G of the CEQA Guidelines

Appendix G of the CEQA Guidelines was revised December 28, 2018. According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact related to GHGs if it would:

- 1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.*
- 2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

For purposes of this analysis, the two Appendix G checklist questions set forth above are utilized as the thresholds of significance when evaluating the environmental effects of the project's GHG emissions. In applying these thresholds, reference is made to CEQA Guidelines Section 15064.4(b)(1)-(3), as described above.

4.0 METHODOLOGY

4.1 Construction CO₂e Emissions Calculation Methodology

GHG impacts related to construction and daily operations were previously estimated for the CPSP EIR which was approved in 2011 though the 2011 emission estimates did not provide estimates for construction. Parcels 1 and-2 have been approved for the development of 157,000 SF of professional office space. The proposed Project seeks to develop this site with 138 Unit Detached multi-family residential development and 567 parking spaces. Parcels 1 and -2 have been previously graded so the remaining construction tasks for this site would be utility trenching, paving, building construction and painting. It should be noted that these remaining tasks would exist for both the proposed Project and the approved professional office scenario and the relative duration based on discussion with the Project engineer, the completion of the GP buildout or the Project scenario would essentially be the same. The Project construction dates were estimated based on a construction kickoff starting in 2023 with construction ending sometime in 2024.

For purposes of analysis the remaining construction was analyzed using the latest CalEEMod 2020.4.0 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2021. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the Project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. Two construction models have been prepared. The CalEEMod input/output model for each modeled scenario is shown in ***Attachments A and -B*** to this report.

This is a comparative analysis between what was projected within the CPSP buildout (up to 157,000 SF of office professional) and what is now proposed as discussed in the Project description. Since the proposed Project is slightly larger with respect to square footage, a variation in estimated construction emissions is expected and will be presented in the findings section of this report. For both construction models, expected construction durations and equipment necessary as projected by model defaults is shown in Table 4.1. It should be noted that even though the construction model equipment and durations are the same, the model predicts that the worker and vendor trips will be different as well as the surface areas to be painted.

Table 4.1: Expected Construction Equipment (Proposed Project and GP Buildout)

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Trenching	01/01/2023	01/20/2023	
Tractors/Loaders/Backhoes			2
Paving	01/21/2023	02/17/2023	
Pavers			2
Paving Equipment			2
Rollers			2
Building Construction	02/18/2023	04/12/2024	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	1/13/2024	4/12/2024	
Air Compressors			1

This equipment list is based upon equipment inventory within CalEEMod and similar size projects in the County of San Diego.

4.2 Operational Emissions Calculation Methodology

Operational GHG sources for the Project would include area sources such as landscaping, and hearth operations, energy sources from natural gas and electrical usage, mobile sources from vehicular traffic to include trucks and passenger vehicles, solid waste from trash generation, and water uses, which are calculated within CalEEMod.

This analysis is focused on the relative difference in GHG emissions from two similarly compared scenarios (Project and GP Buildout). Modeling for both the proposed Project includes natural gas fireplaces which is a requirement for all residential uses within the CPSP.

It should be noted that the CPSP also requires mitigation measures not specifically modeled but since the proposed Project is within the CPSP, the Project would be required to implement any residential related mitigation measures. It is not the intent of this analysis to modify Mitigation Measures required by the CPSP which were approved in 2011 and therefore all mitigation measures required at that time are still required. The required mitigation measures are presented at the end of this section for reference.

GHG emissions for area, mobile, energy, water, and solid waste source emissions were estimated based on default inputs with the exception of traffic. A transportation analysis was prepared by the client for the project and the project was estimated to generate 1,380 average daily trips (ADT) (Urban Systems Associates, Inc. , 2021) whereas the previously proposed

professional office was calculated to generate 2,669 ADT (LOS Engineering, 2009). The project would generate a net decrease of 1,289 ADT.

The GHG analysis for the original project was tasked with reducing GHG emissions by 33% Business as usual (BAU) as projected in 2020. This methodology is no longer the preferred method of calculating GHG significance in the County. It is important to mention however that an 8 percent GHG reduction mobile emissions was assumed due to the "mixed-use" designation (SRA, 2010).

According to the project transportation analysis (Urban Systems Associates, Inc. , 2021), "... by converting the professional office component of the project to residential uses, the balance of land uses shifts. This could result in increased external trips. As shown on the land use map for the previously approved Specific Plan, additional land uses which would serve to internalize trips include the Sports Complex, Neighborhood Park and Town Center uses. These uses will not be removed with the proposed land use change. These uses are likely to contribute the most to internalization of trips as they not only comprise the largest components of Commercial ADT for the Specific Plan area (74 percent of the trip generation), they also are the types of uses most attractive to residential uses. This is particularly the case in rural areas where such Town Center and recreation uses are sometimes remote. Therefore, it is highly likely that the professional office component of the Specific Plan area would be a relatively minor contributor to the internalization of trips. Conservatively, this means that the previously approved professional office component could account for 26 percent of the internal reduction."

The overall "Campus Park" project which was approved under TM 5338 & GPA 03-004 estimated that the project would generate 19,941 ADT in total of which 8 percent is 1,595 ADT. The approved professional office component would comprise 26 percent of the 1,595 ADT, which equals 415 ADT.

Since the Proposed project trip reductions from office to residential generate 1,289 reduced trips in total, the GHG effect from removing this assumed 8 percent reduction from the land use change results in essentially adding 415 ADT or essentially only reducing the ADT by 874 ADT (1,289 minus 415). Therefore, for purposes of this analysis, 415 ADT was added to the proposed Project trip Generation bringing the total trip Generation to 1,795 ADT or (1,380+415)ADT. This effort essentially was used to correct the 8 percent GHG specific reduction utilized in the GHG assessment by SRA in 2010 and is used within this assessment.

For this assessment, the operational year of the project would be 2025. Energy-intensity factors were updated within CalEEMod to reflect state mandates on utility providers. SDG&E is the utility provider for the project and by default uses SDG&E's emissions rate in 2009. In

2009 SDG&E achieved 10.5 percent procurement of renewable energy (California Public Utilities Commission, 2016); The state mandate for renewable energy portfolio's (RPS) was 33 percent by 2020 and 60 percent by 2030 (SDG&E, 2020). The RPS inputs are shown on the first page of the CalEEMod output (**Attachment A**) to this report.

CalEEMod 2020.4.0 was updated to reflect San Diego Gas and Electric's (SDG&E) latest emissions rates and show that a 33% RPS was achieved. 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 (California Public Utilities Commission, 2016). For CalEEMod 2020.4.0 SDG&E updated the emissions with a benchmark of 33% RPS achieved or roughly 540 pounds per megawatt hour (lb/MWh). This emission factor is evident from tracking GHG emission factors from the sources identified.

In accordance with SB 100, SDG&E will achieve an RPS of 60% in 2030. After correcting the emissions based on RPS achievements identified in CalEEMod 2020.4.0, the emission factors in 2030 are shown in Table 4.2. The calculations for these emission factors are shown in **Attachment C**.

Table 4.2: SDG&E Energy Intensity Factors

GHG	Current RPS Factors 2020 33% Achieved (lbs/MWh)	2025 RPS Factors 46.5% Achieved (lbs/MWh)	Any Year no RPS Emission Factors (lbs/MWh)
Carbon Dioxide (CO ₂)	539.98	431.18	805.94
Methane (CH ₄)	0.033	0.0264	0.0493
Nitrous Oxide (N ₂ O)	0.004	0.0032	0.0060

As noted above, the approved CPSP project was previously approved. The findings as related to GHG impacts were less than significant though required mitigation measures which are still requirements for all uses within the CPSP (Development Design Services & GraphicAccess Inc., 2010) and are shown in Table 4.3. No additional Mitigation Measures or design features are proposed for the Proposed Project.

Table 4.3: Approved CPSP GHG Reductions and Mitigation Measures (2011)

Strategy to Reduce GHG Emissions	Proposed Project Design Features
Mixed-Use Design/Alternative Transportation	The Passerelle Project includes residential, retail, and office uses that encourage reduction in vehicle miles traveled and the use of alternative transportation to access the retail and office centers through pedestrian and bicycle access. The original analysis incorporated an 8% reduction to mobile emissions. It should be noted LDN calculated that the reduction would have a net effect of an additional 415 ADT.
Achieve 50% Statewide Diversion Goal	Passerelle will provide residents with separate recycling and waste receptacles to support the 50% state-wide solid waste diversion goal (AB 939). Passerelle will require separation and recycling of construction waste.
Forestry	The Passerelle landscaping palette will include drought-tolerant trees. These plantings will contribute to on-site carbon storage, provide shade, and reduce heating from impervious surfaces (CARB Early Action Measure/Energy Efficiency 2-9).
Afforestation/Reforestation	The Passerelle compact land-use patterns reduce habitat fragmentation and contribute to the preservation of natural habitats, including forests and woodlands.
Reclaimed Water	Passerelle will use reclaimed water, if available, to the extent possible.
Water Use Efficiency	Passerelle will strive for a 50% reduction in residential water use through features such as low-flow appliances (incl. toilets, shower heads, washing machines), a drought-tolerant landscape palette, weather-based irrigation controllers, and other water conservation measures
Building Energy Efficiency	Buildings at Passerelle will achieve energy performance equivalent to 15% better than current Title 24 standards.
Appliance Energy Efficiency	Residents at Passerelle will be offered a choice of energy efficient appliances (including washer/dryers, refrigerators) and appliances installed by builders will be Energy Star (including dishwashers).
Smart Growth Land Use Patterns	Smart growth land use patterns that reduce the amount of land being developed with reduce greenhouse gas emissions.
Education	Passerelle will provide educational materials for residents discussing strategies for reducing GHG emissions associated with the operation of their buildings (CARB Early Action Measure/Education 2-7).

5.0 FINDINGS

5.1 Potential to Generate Significant GHG Emissions

The purpose of this GHG assessment is to provide documentation in support of the County’s CEQA compliance requirement. The proposed Project’s GHG emissions impacts are based on the recommendations provided in Appendix G of the CEQA Guidelines which are (14 CCR 15000 et seq.):

- 1. Will the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***
- 2. Will the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

5.2 Project Generated Greenhouse Gas Emissions

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

Construction (Proposed Project)

Utilizing the CalEEMod inputs for the model as shown in Table 4.1 above, we find that construction of the Project will produce approximately 834.75 MT CO₂e from construction activities (See Table 5.1). Given the fact that the total emissions would ultimately contribute to cumulative levels, it is acceptable to average the total construction emission over the life of the Project, which is assumed to be 30 years, in order to evaluate Project emissions against those allowed by the General Plan and is consistent with the South Coast Air Quality Management District (SCAQMD) recommendations for construction GHG emissions (SCAQMD, 2008). Given this, the Project would add approximately 27.82 MT CO₂e per year from construction.

Table 5.1: Proposed Project Construction CO₂e Emissions Summary

Year	Bio-CO₂	NBio-CO₂	Total CO₂	CH₄	N₂O	CO₂e
2023	0.00	610.81	610.81	0.08	0.02	619.00
2024	0.00	213.05	213.05	0.02	0.01	215.75
Project Total (MT CO₂e)						834.75
Annualized Emission Increase over 30 years (MT CO₂e per Year)						27.82
Expected construction emissions are based upon CalEEMod modeling for equipment listed in Table 4.1 above.						

Operations (Proposed Project)

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. The proposed Project would construct 138 Unit Detached residential units and would be expected to fully operational in 2025. The proposed Project operational emissions include the amortized construction emissions above and would generate 2,548.19 MT CO₂e annually and are shown in Table 5.2.

Table 5.2: Proposed Project Operational GHG emissions (MT/Year)

Source	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e (MT/Yr)
Area	0.00	110.38	110.38	0.00	0.00	111.07
Energy	0.00	172.75	172.75	0.01	0.00	173.50
Mobile	0.00	2126.08	2126.08	0.14	0.09	2156.30
Waste	12.89	0.00	12.89	0.76	0.00	31.92
Water	2.85	35.21	38.07	0.30	0.01	47.58
Construction Emissions						27.82
Combined Project Total GHG Emissions						2,548.19
Data is presented in decimal format and may have rounding errors.						

Construction (Approved GP Buildout Scenario)

The Approved GP buildout would allow for the construction of 157,000 SF of office professional. Using a similar methodology as for the proposed Project, the buildout scenario would generate 803.54 MT CO₂e from construction activities (See Table 5.3). The 30 year amortized emission which would be added to the GP operations would be approximately 26.78 MT CO₂e per year from construction.

Table 5.3: Approved General Plan Construction CO₂e Emissions Summary

Year	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
2023	0.00	588.56	588.56	0.08	0.02	597.54
2024	0.00	203.07	203.07	0.02	0.01	206.00
Project Total (MT CO₂e)						803.54
Annualized Emission Increase over 30 years (MT CO₂e per Year)						26.78
Expected construction emissions are based upon CalEEMod modeling for equipment listed in Table 4.1 above.						

Operations (Approved GP Buildout Scenario)

Based on the assumptions discussed above, the Approved GP buildout project operations including amortized GP Buildout construction emissions would generate 3,233.05MT CO₂e annually which is shown in Table 5.4 below.

Table 5.4: Approved General Plan Operational GHG emissions (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	581.58	581.58	0.03	0.01	584.06
Mobile	0.00	2,366.58	2,366.58	0.17	0.11	2,402.18
Waste	29.64	0.00	29.64	1.75	0.00	73.43
Water	8.85	108.22	117.08	0.92	0.02	146.59
Construction Emissions						26.78
Project Total GHG Emissions						3,233.05
Data is presented in decimal format and may have rounding errors.						

The primary purpose for this comparison is to demonstrate that the project operations would have been assumed in the GP by showing that the proposed Project operations would generate fewer GHG emissions than the GP buildout operations. Based on these findings, the Approved GP buildout would generate 3,233.05 MT of CO₂e annually and the proposed Project would generate 2,548.19 MT of CO₂e annually or 684.86 MT CO₂e fewer GHG emissions annually than would be produced under a general plan buildout use. Given this, since the Project generates fewer emissions than allowed under the General Plan for the site and would therefore have less than significant impact on the environment.

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

The Project is located within the CPSP area and would be required to implement all specific mitigation measures governing the area were approved by the County in 2011. The specific mitigation measures with respect the GHG reductions are identified for reference purposes in Table 4.3 above as well as the CPSP environmental documents (Development Design Services & GraphicAccess Inc., 2010).

It should be noted that the project would change the office land use to residential. The office space use was not specifically shown to reduce trips within any traffic studies but was utilized for an 8% reduction in GHGs for mobile emissions in the original GHG analysis (SRA, 2010).

This proposed Project analysis added an additional 415 ADT to account for the internalized trips which could be attributed to the office space “mixed use” contribution to the GHG reductions that was applied in the original GHG analysis. Impacts previously identified were based on a 33% reduction over BAU which is a methodology no longer accepted within the County of San Diego.

This analysis compares what is currently approved and shows that the proposed Project action would reduce GHG emissions from the approved Project scenario. By default, this indicates that the Project Action would generate fewer GHG emissions than what is currently approved and would therefore generate a less than significant impact on the environment. The proposed Project would likely be required to include many additional measures designed to reduce GHG emissions and would likely include Electric Vehicle (EV) charging stations, solar panels consistent with Title 24 (2019), low flow water fixtures, Planting of Trees etc. The effects of these measures was not calculated in this analysis.

Given this, since the proposed Project was found to reduce GHG emissions relative to the approved office professional use, and since the project would be required to implement all mitigation measures specific to the CPSP, the project would not conflict with any County plans, policies or regulations for the purposes of reducing GHGs. The Project would also be required to implement all building code requirements which will include additional GHG reduction requirements not analyzed within this report.

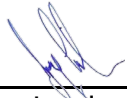
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7.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the projected CO₂e emissions from the Project development based upon the best available information at the time of preparation. The report was prepared by Jeremy Loudon; a County approved CEQA Consultant for Air Quality and GHG.



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Date December 4, 2023

ATTACHMENT A

CALEEMOD 2020.4.0 (Proposed Project - 138 Unit Detached Unit Multi-Family
Development)

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

**Passerelle 138 unit Detached Mult-Family SPA
San Diego County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	567.00	Space	5.10	226,800.00	0
Apartment Mid Rise	138.00	Dwelling Unit	6.86	138,000.00	395

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	431.18	CH4 Intensity (lb/MWhr)	0.026	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2025 46.5%

Land Use - 11.96 ac

Construction Phase - CS... Project has been graded already. Onsite Utility trenching necessary only and building construction

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - ce

Trips and VMT -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Per TS 10 Trips per unit. An additional 415 trips was added or 3.01 trips per unit... see report for explanation

Vehicle Emission Factors -

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All units NG Hearth

Area Coating - Rule 67 Paint

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
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_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstructionPhase	NumDays	20.00	65.00
tblFireplaces	NumberGas	75.90	138.00
tblFireplaces	NumberNoFireplace	13.80	0.00
tblFireplaces	NumberWood	48.30	0.00
tblLandUse	LotAcreage	3.63	6.86
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.026
tblProjectCharacteristics	CO2IntensityFactor	539.98	431.18
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	HO_TTP	39.60	39.00
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	HW_TTP	41.60	42.00

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

tblVehicleTrips	ST_TR	4.91	13.01
tblVehicleTrips	SU_TR	4.09	13.01
tblVehicleTrips	WD_TR	5.44	13.01
tblWoodstoves	NumberCatalytic	6.90	0.00
tblWoodstoves	NumberNoncatalytic	6.90	0.00

2.0 Emissions Summary

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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					
2023	0.2814	2.0430	2.8174	6.7600e-003	0.3110	0.0878	0.3988	0.0834	0.0825	0.1659	0.0000	610.8140	610.8140	0.0781	0.0209	619.0017
2024	0.9869	0.6440	0.9553	2.3500e-003	0.1187	0.0260	0.1447	0.0318	0.0246	0.0564	0.0000	213.0515	213.0515	0.0239	7.0300e-003	215.7455
Maximum	0.9869	2.0430	2.8174	6.7600e-003	0.3110	0.0878	0.3988	0.0834	0.0825	0.1659	0.0000	610.8140	610.8140	0.0781	0.0209	619.0017

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					
2023	0.2814	2.0430	2.8174	6.7600e-003	0.3110	0.0878	0.3988	0.0834	0.0825	0.1659	0.0000	610.8137	610.8137	0.0781	0.0209	619.0013
2024	0.9869	0.6440	0.9553	2.3500e-003	0.1187	0.0260	0.1447	0.0318	0.0246	0.0564	0.0000	213.0514	213.0514	0.0239	7.0300e-003	215.7454
Maximum	0.9869	2.0430	2.8174	6.7600e-003	0.3110	0.0878	0.3988	0.0834	0.0825	0.1659	0.0000	610.8137	610.8137	0.0781	0.0209	619.0013

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
5	1-1-2023	3-31-2023	0.4363	0.4363
6	4-1-2023	6-30-2023	0.6255	0.6255
7	7-1-2023	9-30-2023	0.6324	0.6324
8	10-1-2023	12-31-2023	0.6397	0.6397
9	1-1-2024	3-31-2024	1.4184	1.4184
10	4-1-2024	6-30-2024	0.2025	0.2025
		Highest	1.4184	1.4184

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

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	0.6853	0.1057	1.0688	6.5000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	110.3796	110.3796	3.7100e-003	1.9900e-003	111.0662
Energy	5.4100e-003	0.0463	0.0197	3.0000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	172.7530	172.7530	8.2100e-003	1.8100e-003	173.4981
Mobile	1.0053	1.1989	10.1178	0.0224	2.4927	0.0172	2.5099	0.6653	0.0161	0.6813	0.0000	2,126.0755	2,126.0755	0.1390	0.0898	2,156.3030
Waste						0.0000	0.0000		0.0000	0.0000	12.8859	0.0000	12.8859	0.7615	0.0000	31.9242
Water						0.0000	0.0000		0.0000	0.0000	2.8525	35.2144	38.0669	0.2951	7.1600e-003	47.5790
Total	1.6961	1.3509	11.2064	0.0234	2.4927	0.0342	2.5269	0.6653	0.0331	0.6983	15.7384	2,444.4224	2,460.1608	1.2075	0.1007	2,520.3705

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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	0.6853	0.1057	1.0688	6.5000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	110.3796	110.3796	3.7100e-003	1.9900e-003	111.0662
Energy	5.4100e-003	0.0463	0.0197	3.0000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	172.7530	172.7530	8.2100e-003	1.8100e-003	173.4981
Mobile	1.0053	1.1989	10.1178	0.0224	2.4927	0.0172	2.5099	0.6653	0.0161	0.6813	0.0000	2,126.0755	2,126.0755	0.1390	0.0898	2,156.3030
Waste						0.0000	0.0000		0.0000	0.0000	12.8859	0.0000	12.8859	0.7615	0.0000	31.9242
Water						0.0000	0.0000		0.0000	0.0000	2.8525	35.2144	38.0669	0.2951	7.1600e-003	47.5790
Total	1.6961	1.3509	11.2064	0.0234	2.4927	0.0342	2.5269	0.6653	0.0331	0.6983	15.7384	2,444.4224	2,460.1608	1.2075	0.1007	2,520.3705

	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	Trenching	Trenching	1/1/2023	1/20/2023	5	15	
2	Paving	Paving	1/21/2023	2/17/2023	5	20	
3	Building Construction	Building Construction	2/18/2023	4/12/2024	5	300	

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

4	Architectural Coating	Architectural Coating	1/13/2024	4/12/2024	5	65
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.1

Residential Indoor: 279,450; Residential Outdoor: 93,150; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,608 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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
Trenching	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	39.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	195.00	52.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

3.1 Mitigation Measures Construction

3.2 Trenching - 2023

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	2.2700e-003	0.0230	0.0335	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1038	4.1038	1.3300e-003	0.0000	4.1370
Total	2.2700e-003	0.0230	0.0335	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1038	4.1038	1.3300e-003	0.0000	4.1370

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	1.3000e-004	1.0000e-004	1.2200e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3711	0.3711	1.0000e-005	1.0000e-005	0.3741
Total	1.3000e-004	1.0000e-004	1.2200e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3711	0.3711	1.0000e-005	1.0000e-005	0.3741

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

3.2 Trenching - 2023

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	2.2700e-003	0.0230	0.0335	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1038	4.1038	1.3300e-003	0.0000	4.1370
Total	2.2700e-003	0.0230	0.0335	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1038	4.1038	1.3300e-003	0.0000	4.1370

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	1.3000e-004	1.0000e-004	1.2200e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3711	0.3711	1.0000e-005	1.0000e-005	0.3741
Total	1.3000e-004	1.0000e-004	1.2200e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3711	0.3711	1.0000e-005	1.0000e-005	0.3741

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

3.3 Paving - 2023

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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	6.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0170	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888

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	5.3000e-004	4.0000e-004	4.9000e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.4845	1.4845	3.0000e-005	4.0000e-005	1.4963
Total	5.3000e-004	4.0000e-004	4.9000e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.4845	1.4845	3.0000e-005	4.0000e-005	1.4963

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

3.3 Paving - 2023

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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	6.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0170	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888

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	5.3000e-004	4.0000e-004	4.9000e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.4845	1.4845	3.0000e-005	4.0000e-005	1.4963
Total	5.3000e-004	4.0000e-004	4.9000e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.4845	1.4845	3.0000e-005	4.0000e-005	1.4963

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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 - 2023

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	0.1769	1.6183	1.8275	3.0300e-003		0.0787	0.0787		0.0741	0.0741	0.0000	260.7803	260.7803	0.0620	0.0000	262.3312
Total	0.1769	1.6183	1.8275	3.0300e-003		0.0787	0.0787		0.0741	0.0741	0.0000	260.7803	260.7803	0.0620	0.0000	262.3312

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	6.5500e-003	0.2414	0.0880	1.0900e-003	0.0351	1.3900e-003	0.0365	0.0102	1.3300e-003	0.0115	0.0000	106.9462	106.9462	3.2400e-003	0.0155	111.6485
Worker	0.0780	0.0579	0.7165	2.3400e-003	0.2735	1.4500e-003	0.2750	0.0727	1.3400e-003	0.0740	0.0000	217.1013	217.1013	5.0200e-003	5.3700e-003	218.8258
Total	0.0845	0.2993	0.8045	3.4300e-003	0.3087	2.8400e-003	0.3115	0.0828	2.6700e-003	0.0855	0.0000	324.0475	324.0475	8.2600e-003	0.0209	330.4744

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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 - 2023

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	0.1769	1.6183	1.8275	3.0300e-003		0.0787	0.0787		0.0741	0.0741	0.0000	260.7800	260.7800	0.0620	0.0000	262.3309
Total	0.1769	1.6183	1.8275	3.0300e-003		0.0787	0.0787		0.0741	0.0741	0.0000	260.7800	260.7800	0.0620	0.0000	262.3309

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	6.5500e-003	0.2414	0.0880	1.0900e-003	0.0351	1.3900e-003	0.0365	0.0102	1.3300e-003	0.0115	0.0000	106.9462	106.9462	3.2400e-003	0.0155	111.6485
Worker	0.0780	0.0579	0.7165	2.3400e-003	0.2735	1.4500e-003	0.2750	0.0727	1.3400e-003	0.0740	0.0000	217.1013	217.1013	5.0200e-003	5.3700e-003	218.8258
Total	0.0845	0.2993	0.8045	3.4300e-003	0.3087	2.8400e-003	0.3115	0.0828	2.6700e-003	0.0855	0.0000	324.0475	324.0475	8.2600e-003	0.0209	330.4744

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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 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	0.0552	0.5041	0.6063	1.0100e-003		0.0230	0.0230		0.0216	0.0216	0.0000	86.9434	86.9434	0.0206	0.0000	87.4574
Total	0.0552	0.5041	0.6063	1.0100e-003		0.0230	0.0230		0.0216	0.0216	0.0000	86.9434	86.9434	0.0206	0.0000	87.4574

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	2.1000e-003	0.0799	0.0287	3.6000e-004	0.0117	4.7000e-004	0.0122	3.3800e-003	4.4000e-004	3.8300e-003	0.0000	35.0278	35.0278	1.1000e-003	5.0800e-003	36.5688
Worker	0.0245	0.0173	0.2229	7.5000e-004	0.0912	4.6000e-004	0.0916	0.0242	4.2000e-004	0.0247	0.0000	70.5531	70.5531	1.5200e-003	1.6700e-003	71.0876
Total	0.0266	0.0972	0.2516	1.1100e-003	0.1029	9.3000e-004	0.1038	0.0276	8.6000e-004	0.0285	0.0000	105.5808	105.5808	2.6200e-003	6.7500e-003	107.6565

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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 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	0.0552	0.5041	0.6063	1.0100e-003		0.0230	0.0230		0.0216	0.0216	0.0000	86.9433	86.9433	0.0206	0.0000	87.4573
Total	0.0552	0.5041	0.6063	1.0100e-003		0.0230	0.0230		0.0216	0.0216	0.0000	86.9433	86.9433	0.0206	0.0000	87.4573

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	2.1000e-003	0.0799	0.0287	3.6000e-004	0.0117	4.7000e-004	0.0122	3.3800e-003	4.4000e-004	3.8300e-003	0.0000	35.0278	35.0278	1.1000e-003	5.0800e-003	36.5688
Worker	0.0245	0.0173	0.2229	7.5000e-004	0.0912	4.6000e-004	0.0916	0.0242	4.2000e-004	0.0247	0.0000	70.5531	70.5531	1.5200e-003	1.6700e-003	71.0876
Total	0.0266	0.0972	0.2516	1.1100e-003	0.1029	9.3000e-004	0.1038	0.0276	8.6000e-004	0.0285	0.0000	105.5808	105.5808	2.6200e-003	6.7500e-003	107.6565

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

3.5 Architectural Coating - 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					
Archit. Coating	0.8950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8700e-003	0.0396	0.0588	1.0000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	8.2981	8.2981	4.7000e-004	0.0000	8.3098
Total	0.9009	0.0396	0.0588	1.0000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	8.2981	8.2981	4.7000e-004	0.0000	8.3098

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	4.2400e-003	3.0000e-003	0.0386	1.3000e-004	0.0158	8.0000e-005	0.0159	4.2000e-003	7.0000e-005	4.2700e-003	0.0000	12.2292	12.2292	2.6000e-004	2.9000e-004	12.3219
Total	4.2400e-003	3.0000e-003	0.0386	1.3000e-004	0.0158	8.0000e-005	0.0159	4.2000e-003	7.0000e-005	4.2700e-003	0.0000	12.2292	12.2292	2.6000e-004	2.9000e-004	12.3219

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

3.5 Architectural Coating - 2024

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	0.8950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8700e-003	0.0396	0.0588	1.0000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	8.2981	8.2981	4.7000e-004	0.0000	8.3098
Total	0.9009	0.0396	0.0588	1.0000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	8.2981	8.2981	4.7000e-004	0.0000	8.3098

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	4.2400e-003	3.0000e-003	0.0386	1.3000e-004	0.0158	8.0000e-005	0.0159	4.2000e-003	7.0000e-005	4.2700e-003	0.0000	12.2292	12.2292	2.6000e-004	2.9000e-004	12.3219
Total	4.2400e-003	3.0000e-003	0.0386	1.3000e-004	0.0158	8.0000e-005	0.0159	4.2000e-003	7.0000e-005	4.2700e-003	0.0000	12.2292	12.2292	2.6000e-004	2.9000e-004	12.3219

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	1.0053	1.1989	10.1178	0.0224	2.4927	0.0172	2.5099	0.6653	0.0161	0.6813	0.0000	2,126.0755	2,126.0755	0.1390	0.0898	2,156.3030
Unmitigated	1.0053	1.1989	10.1178	0.0224	2.4927	0.0172	2.5099	0.6653	0.0161	0.6813	0.0000	2,126.0755	2,126.0755	0.1390	0.0898	2,156.3030

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,795.38	1,795.38	1795.38	6,663,812	6,663,812
Parking Lot	0.00	0.00	0.00		
Total	1,795.38	1,795.38	1,795.38	6,663,812	6,663,812

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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	16.80	7.10	7.90	42.00	19.00	39.00	86	11	3
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

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
Apartments Mid Rise	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

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	119.1707	119.1707	7.1900e-003	8.3000e-004	119.5974
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	119.1707	119.1707	7.1900e-003	8.3000e-004	119.5974
NaturalGas Mitigated	5.4100e-003	0.0463	0.0197	3.0000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5823	53.5823	1.0300e-003	9.8000e-004	53.9007
NaturalGas Unmitigated	5.4100e-003	0.0463	0.0197	3.0000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5823	53.5823	1.0300e-003	9.8000e-004	53.9007

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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	1.00409e+006	5.4100e-003	0.0463	0.0197	3.0000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5823	53.5823	1.0300e-003	9.8000e-004	53.9007
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
Total		5.4100e-003	0.0463	0.0197	3.0000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5823	53.5823	1.0300e-003	9.8000e-004	53.9007

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	1.00409e+006	5.4100e-003	0.0463	0.0197	3.0000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5823	53.5823	1.0300e-003	9.8000e-004	53.9007
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
Total		5.4100e-003	0.0463	0.0197	3.0000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5823	53.5823	1.0300e-003	9.8000e-004	53.9007

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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	529939	103.6455	6.2500e-003	7.2000e-004	104.0167
Parking Lot	79380	15.5251	9.4000e-004	1.1000e-004	15.5807
Total		119.1707	7.1900e-003	8.3000e-004	119.5974

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	529939	103.6455	6.2500e-003	7.2000e-004	104.0167
Parking Lot	79380	15.5251	9.4000e-004	1.1000e-004	15.5807
Total		119.1707	7.1900e-003	8.3000e-004	119.5974

6.0 Area Detail

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

6.1 Mitigation Measures Area

	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	0.6853	0.1057	1.0688	6.5000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	110.3796	110.3796	3.7100e-003	1.9900e-003	111.0662
Unmitigated	0.6853	0.1057	1.0688	6.5000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	110.3796	110.3796	3.7100e-003	1.9900e-003	111.0662

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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

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	0.0895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5536					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0110	0.0939	0.0399	6.0000e-004		7.5900e-003	7.5900e-003		7.5900e-003	7.5900e-003	0.0000	108.6957	108.6957	2.0800e-003	1.9900e-003	109.3416
Landscaping	0.0312	0.0118	1.0289	5.0000e-005		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003	0.0000	1.6839	1.6839	1.6300e-003	0.0000	1.7246
Total	0.6853	0.1057	1.0688	6.5000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	110.3796	110.3796	3.7100e-003	1.9900e-003	111.0662

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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	0.0895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5536					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0110	0.0939	0.0399	6.0000e-004		7.5900e-003	7.5900e-003		7.5900e-003	7.5900e-003	0.0000	108.6957	108.6957	2.0800e-003	1.9900e-003	109.3416
Landscaping	0.0312	0.0118	1.0289	5.0000e-005		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003	0.0000	1.6839	1.6839	1.6300e-003	0.0000	1.7246
Total	0.6853	0.1057	1.0688	6.5000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	110.3796	110.3796	3.7100e-003	1.9900e-003	111.0662

7.0 Water Detail

7.1 Mitigation Measures Water

Passerelle 138 unit Detached Mult-Family SPA - San Diego County, Annual

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	38.0669	0.2951	7.1600e-003	47.5790
Unmitigated	38.0669	0.2951	7.1600e-003	47.5790

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.99126 / 5.6684	38.0669	0.2951	7.1600e-003	47.5790
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		38.0669	0.2951	7.1600e-003	47.5790

Passerelle 138 unit Detached Mult-Family SPA - 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			
Apartments Mid Rise	8.99126 / 5.6684	38.0669	0.2951	7.1600e-003	47.5790
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		38.0669	0.2951	7.1600e-003	47.5790

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.8859	0.7615	0.0000	31.9242
Unmitigated	12.8859	0.7615	0.0000	31.9242

Passerelle 138 unit Detached Mult-Family SPA - 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

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	63.48	12.8859	0.7615	0.0000	31.9242
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		12.8859	0.7615	0.0000	31.9242

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	63.48	12.8859	0.7615	0.0000	31.9242
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		12.8859	0.7615	0.0000	31.9242

9.0 Operational Offroad

Passerelle 138 unit Detached Mult-Family SPA - 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	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
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Boilers

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

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT B

CALEEMOD 2020.4.0 (General Plan Buildout – 157,000 SF Office Professional)

Campus Park 157,000 SF of Office Space - San Diego County, Annual

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

**Campus Park 157,000 SF of Office Space
San Diego County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	157.00	1000sqft	6.00	157,000.00	0
Parking Lot	600.00	Space	5.96	240,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	431.18	CH4 Intensity (lb/MWhr)	0.026	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - 2025 RPS
- Land Use - Parking 4 per ksf per county ord10251, 157000sf office per traffic study
- Construction Phase - cs
- Off-road Equipment - ce
- Architectural Coating - rule 67 paint
- Vehicle Trips - per rs... 2,669 average trips per day
- Area Coating - Rule 67 Paint
- Energy Use -
- Fleet Mix -
- Trips and VMT -
- Water And Wastewater -

Campus Park 157,000 SF of Office Space - San Diego County, Annual

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

Solid Waste -

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
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblConstructionPhase	NumDays	20.00	65.00
tblLandUse	LotAcreage	3.60	6.00
tblLandUse	LotAcreage	5.40	5.96
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.026
tblProjectCharacteristics	CO2IntensityFactor	539.98	431.18
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	2.21	17.00
tblVehicleTrips	SU_TR	0.70	17.00
tblVehicleTrips	WD_TR	9.74	17.00

2.0 Emissions Summary

Campus Park 157,000 SF of Office Space - San Diego County, Annual

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					
2023	0.2666	2.0903	2.6777	6.5000e-003	0.2581	0.0878	0.3459	0.0696	0.0825	0.1521	0.0000	588.5636	588.5636	0.0778	0.0236	597.5377
2024	0.8470	0.6594	0.9032	2.2400e-003	0.0974	0.0260	0.1234	0.0262	0.0246	0.0508	0.0000	203.0667	203.0667	0.0238	7.8600e-003	206.0039
Maximum	0.8470	2.0903	2.6777	6.5000e-003	0.2581	0.0878	0.3459	0.0696	0.0825	0.1521	0.0000	588.5636	588.5636	0.0778	0.0236	597.5377

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					
2023	0.2666	2.0903	2.6777	6.5000e-003	0.2581	0.0878	0.3459	0.0696	0.0825	0.1521	0.0000	588.5633	588.5633	0.0778	0.0236	597.5374
2024	0.8470	0.6594	0.9032	2.2400e-003	0.0974	0.0260	0.1234	0.0262	0.0246	0.0508	0.0000	203.0666	203.0666	0.0238	7.8600e-003	206.0038
Maximum	0.8470	2.0903	2.6777	6.5000e-003	0.2581	0.0878	0.3459	0.0696	0.0825	0.1521	0.0000	588.5633	588.5633	0.0778	0.0236	597.5374

Campus Park 157,000 SF of Office Space - San Diego County, Annual

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	1-1-2023	3-31-2023	0.4173	0.4173
6	4-1-2023	6-30-2023	0.6343	0.6343
7	7-1-2023	9-30-2023	0.6413	0.6413
8	10-1-2023	12-31-2023	0.6484	0.6484
9	1-1-2024	3-31-2024	1.3097	1.3097
10	4-1-2024	6-30-2024	0.1859	0.1859
		Highest	1.3097	1.3097

Campus Park 157,000 SF of Office Space - San Diego County, Annual

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

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	0.7104	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0135	0.0135	4.0000e-005	0.0000	0.0144
Energy	0.0170	0.1542	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	581.5788	581.5788	0.0282	5.9600e-003	584.0576
Mobile	1.2688	1.3981	11.8240	0.0250	2.7563	0.0195	2.7758	0.7356	0.0182	0.7538	0.0000	2,366.5848	2,366.5848	0.1665	0.1055	2,402.1816
Waste						0.0000	0.0000		0.0000	0.0000	29.6387	0.0000	29.6387	1.7516	0.0000	73.4287
Water						0.0000	0.0000		0.0000	0.0000	8.8527	108.2242	117.0769	0.9158	0.0222	146.5939
Total	1.9962	1.5523	11.9605	0.0259	2.7563	0.0312	2.7876	0.7356	0.0299	0.7655	38.4914	3,056.4013	3,094.8927	2.8620	0.1337	3,206.2761

Campus Park 157,000 SF of Office Space - San Diego County, Annual

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	0.7104	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0135	0.0135	4.0000e-005	0.0000	0.0144
Energy	0.0170	0.1542	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	581.5788	581.5788	0.0282	5.9600e-003	584.0576
Mobile	1.2688	1.3981	11.8240	0.0250	2.7563	0.0195	2.7758	0.7356	0.0182	0.7538	0.0000	2,366.5848	2,366.5848	0.1665	0.1055	2,402.1816
Waste						0.0000	0.0000		0.0000	0.0000	29.6387	0.0000	29.6387	1.7516	0.0000	73.4287
Water						0.0000	0.0000		0.0000	0.0000	8.8527	108.2242	117.0769	0.9158	0.0222	146.5939
Total	1.9962	1.5523	11.9605	0.0259	2.7563	0.0312	2.7876	0.7356	0.0299	0.7655	38.4914	3,056.4013	3,094.8927	2.8620	0.1337	3,206.2761

	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	Trenching	Trenching	1/1/2023	1/20/2023	5	15	
2	Architectural Coating	Architectural Coating	1/13/2024	4/12/2024	5	65	
3	Paving	Paving	1/21/2023	2/17/2023	5	20	

Campus Park 157,000 SF of Office Space - San Diego County, Annual

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

4	Building Construction	Building Construction	2/18/2023	4/12/2024	5	300
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.96

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 235,500; Non-Residential Outdoor: 78,500; Striped Parking Area: 14,400 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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
Trenching	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	151.00	65.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

Campus Park 157,000 SF of Office Space - San Diego County, Annual

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

3.1 Mitigation Measures Construction

3.2 trenching - 2023

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	2.2700e-003	0.0230	0.0335	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1038	4.1038	1.3300e-003	0.0000	4.1370
Total	2.2700e-003	0.0230	0.0335	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1038	4.1038	1.3300e-003	0.0000	4.1370

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	1.3000e-004	1.0000e-004	1.2200e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3711	0.3711	1.0000e-005	1.0000e-005	0.3741
Total	1.3000e-004	1.0000e-004	1.2200e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3711	0.3711	1.0000e-005	1.0000e-005	0.3741

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

3.2 trenching - 2023

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	2.2700e-003	0.0230	0.0335	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1038	4.1038	1.3300e-003	0.0000	4.1370
Total	2.2700e-003	0.0230	0.0335	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1038	4.1038	1.3300e-003	0.0000	4.1370

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	1.3000e-004	1.0000e-004	1.2200e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3711	0.3711	1.0000e-005	1.0000e-005	0.3741
Total	1.3000e-004	1.0000e-004	1.2200e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3711	0.3711	1.0000e-005	1.0000e-005	0.3741

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

3.3 Architectural Coating - 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					
Archit. Coating	0.7611					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8700e-003	0.0396	0.0588	1.0000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	8.2981	8.2981	4.7000e-004	0.0000	8.3098
Total	0.7669	0.0396	0.0588	1.0000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	8.2981	8.2981	4.7000e-004	0.0000	8.3098

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	3.2600e-003	2.3000e-003	0.0297	1.0000e-004	0.0122	6.0000e-005	0.0122	3.2300e-003	6.0000e-005	3.2900e-003	0.0000	9.4071	9.4071	2.0000e-004	2.2000e-004	9.4784
Total	3.2600e-003	2.3000e-003	0.0297	1.0000e-004	0.0122	6.0000e-005	0.0122	3.2300e-003	6.0000e-005	3.2900e-003	0.0000	9.4071	9.4071	2.0000e-004	2.2000e-004	9.4784

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3.3 Architectural Coating - 2024

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	0.7611					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8700e-003	0.0396	0.0588	1.0000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	8.2981	8.2981	4.7000e-004	0.0000	8.3098
Total	0.7669	0.0396	0.0588	1.0000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	8.2981	8.2981	4.7000e-004	0.0000	8.3098

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	3.2600e-003	2.3000e-003	0.0297	1.0000e-004	0.0122	6.0000e-005	0.0122	3.2300e-003	6.0000e-005	3.2900e-003	0.0000	9.4071	9.4071	2.0000e-004	2.2000e-004	9.4784
Total	3.2600e-003	2.3000e-003	0.0297	1.0000e-004	0.0122	6.0000e-005	0.0122	3.2300e-003	6.0000e-005	3.2900e-003	0.0000	9.4071	9.4071	2.0000e-004	2.2000e-004	9.4784

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

3.4 Paving - 2023

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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	7.8100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0181	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888

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	5.3000e-004	4.0000e-004	4.9000e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.4845	1.4845	3.0000e-005	4.0000e-005	1.4963
Total	5.3000e-004	4.0000e-004	4.9000e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.4845	1.4845	3.0000e-005	4.0000e-005	1.4963

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

3.4 Paving - 2023

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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	7.8100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0181	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888

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	5.3000e-004	4.0000e-004	4.9000e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.4845	1.4845	3.0000e-005	4.0000e-005	1.4963
Total	5.3000e-004	4.0000e-004	4.9000e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.4845	1.4845	3.0000e-005	4.0000e-005	1.4963

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3.5 Building Construction - 2023

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	0.1769	1.6183	1.8275	3.0300e-003		0.0787	0.0787		0.0741	0.0741	0.0000	260.7803	260.7803	0.0620	0.0000	262.3312
Total	0.1769	1.6183	1.8275	3.0300e-003		0.0787	0.0787		0.0741	0.0741	0.0000	260.7803	260.7803	0.0620	0.0000	262.3312

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	8.1900e-003	0.3018	0.1100	1.3700e-003	0.0439	1.7400e-003	0.0457	0.0127	1.6600e-003	0.0143	0.0000	133.6827	133.6827	4.0500e-003	0.0194	139.5606
Worker	0.0604	0.0448	0.5548	1.8100e-003	0.2118	1.1200e-003	0.2129	0.0563	1.0300e-003	0.0573	0.0000	168.1144	168.1144	3.8800e-003	4.1600e-003	169.4498
Total	0.0686	0.3466	0.6648	3.1800e-003	0.2557	2.8600e-003	0.2586	0.0690	2.6900e-003	0.0717	0.0000	301.7970	301.7970	7.9300e-003	0.0236	309.0104

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3.5 Building Construction - 2023

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	0.1769	1.6183	1.8275	3.0300e-003		0.0787	0.0787		0.0741	0.0741	0.0000	260.7800	260.7800	0.0620	0.0000	262.3309
Total	0.1769	1.6183	1.8275	3.0300e-003		0.0787	0.0787		0.0741	0.0741	0.0000	260.7800	260.7800	0.0620	0.0000	262.3309

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	8.1900e-003	0.3018	0.1100	1.3700e-003	0.0439	1.7400e-003	0.0457	0.0127	1.6600e-003	0.0143	0.0000	133.6827	133.6827	4.0500e-003	0.0194	139.5606
Worker	0.0604	0.0448	0.5548	1.8100e-003	0.2118	1.1200e-003	0.2129	0.0563	1.0300e-003	0.0573	0.0000	168.1144	168.1144	3.8800e-003	4.1600e-003	169.4498
Total	0.0686	0.3466	0.6648	3.1800e-003	0.2557	2.8600e-003	0.2586	0.0690	2.6900e-003	0.0717	0.0000	301.7970	301.7970	7.9300e-003	0.0236	309.0104

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

3.5 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	0.0552	0.5041	0.6063	1.0100e-003		0.0230	0.0230		0.0216	0.0216	0.0000	86.9434	86.9434	0.0206	0.0000	87.4574
Total	0.0552	0.5041	0.6063	1.0100e-003		0.0230	0.0230		0.0216	0.0216	0.0000	86.9434	86.9434	0.0206	0.0000	87.4574

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	2.6300e-003	0.0999	0.0359	4.5000e-004	0.0146	5.8000e-004	0.0152	4.2300e-003	5.6000e-004	4.7800e-003	0.0000	43.7847	43.7847	1.3800e-003	6.3500e-003	45.7111
Worker	0.0190	0.0134	0.1726	5.8000e-004	0.0706	3.6000e-004	0.0710	0.0188	3.3000e-004	0.0191	0.0000	54.6334	54.6334	1.1700e-003	1.2900e-003	55.0474
Total	0.0216	0.1133	0.2084	1.0300e-003	0.0852	9.4000e-004	0.0862	0.0230	8.9000e-004	0.0239	0.0000	98.4181	98.4181	2.5500e-003	7.6400e-003	100.7584

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

3.5 Building Construction - 2024

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	0.0552	0.5041	0.6063	1.0100e-003		0.0230	0.0230		0.0216	0.0216	0.0000	86.9433	86.9433	0.0206	0.0000	87.4573
Total	0.0552	0.5041	0.6063	1.0100e-003		0.0230	0.0230		0.0216	0.0216	0.0000	86.9433	86.9433	0.0206	0.0000	87.4573

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	2.6300e-003	0.0999	0.0359	4.5000e-004	0.0146	5.8000e-004	0.0152	4.2300e-003	5.6000e-004	4.7800e-003	0.0000	43.7847	43.7847	1.3800e-003	6.3500e-003	45.7111
Worker	0.0190	0.0134	0.1726	5.8000e-004	0.0706	3.6000e-004	0.0710	0.0188	3.3000e-004	0.0191	0.0000	54.6334	54.6334	1.1700e-003	1.2900e-003	55.0474
Total	0.0216	0.1133	0.2084	1.0300e-003	0.0852	9.4000e-004	0.0862	0.0230	8.9000e-004	0.0239	0.0000	98.4181	98.4181	2.5500e-003	7.6400e-003	100.7584

4.0 Operational Detail - Mobile

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

4.1 Mitigation Measures Mobile

	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	1.2688	1.3981	11.8240	0.0250	2.7563	0.0195	2.7758	0.7356	0.0182	0.7538	0.0000	2,366.5848	2,366.5848	0.1665	0.1055	2,402.1816
Unmitigated	1.2688	1.3981	11.8240	0.0250	2.7563	0.0195	2.7758	0.7356	0.0182	0.7538	0.0000	2,366.5848	2,366.5848	0.1665	0.1055	2,402.1816

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2,669.00	2,669.00	2669.00	7,368,636	7,368,636
Parking Lot	0.00	0.00	0.00		
Total	2,669.00	2,669.00	2,669.00	7,368,636	7,368,636

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
General Office Building	14.70	6.60	6.60	33.00	48.00	19.00	77	19	4
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

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Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
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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	413.7651	413.7651	0.0250	2.8800e-003	415.2467
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	413.7651	413.7651	0.0250	2.8800e-003	415.2467
NaturalGas Mitigated	0.0170	0.1542	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8137	167.8137	3.2200e-003	3.0800e-003	168.8109
NaturalGas Unmitigated	0.0170	0.1542	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8137	167.8137	3.2200e-003	3.0800e-003	168.8109

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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					
General Office Building	3.14471e+006	0.0170	0.1542	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8137	167.8137	3.2200e-003	3.0800e-003	168.8109
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
Total		0.0170	0.1542	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8137	167.8137	3.2200e-003	3.0800e-003	168.8109

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					
General Office Building	3.14471e+006	0.0170	0.1542	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8137	167.8137	3.2200e-003	3.0800e-003	168.8109
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
Total		0.0170	0.1542	0.1295	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8137	167.8137	3.2200e-003	3.0800e-003	168.8109

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	2.03158e+006	397.3363	0.0240	2.7600e-003	398.7591
Parking Lot	84000	16.4287	9.9000e-004	1.1000e-004	16.4876
Total		413.7651	0.0250	2.8700e-003	415.2467

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	2.03158e+006	397.3363	0.0240	2.7600e-003	398.7591
Parking Lot	84000	16.4287	9.9000e-004	1.1000e-004	16.4876
Total		413.7651	0.0250	2.8700e-003	415.2467

6.0 Area Detail

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6.1 Mitigation Measures Area

	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	0.7104	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0135	0.0135	4.0000e-005	0.0000	0.0144
Unmitigated	0.7104	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0135	0.0135	4.0000e-005	0.0000	0.0144

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	0.0811					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6287					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.4000e-004	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0135	0.0135	4.0000e-005	0.0000	0.0144
Total	0.7104	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0135	0.0135	4.0000e-005	0.0000	0.0144

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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	0.0811					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6287					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.4000e-004	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0135	0.0135	4.0000e-005	0.0000	0.0144
Total	0.7104	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0135	0.0135	4.0000e-005	0.0000	0.0144

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	117.0769	0.9158	0.0222	146.5939
Unmitigated	117.0769	0.9158	0.0222	146.5939

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	27.9042 / 17.1026	117.0769	0.9158	0.0222	146.5939
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		117.0769	0.9158	0.0222	146.5939

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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			
General Office Building	27.9042 / 17.1026	117.0769	0.9158	0.0222	146.5939
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		117.0769	0.9158	0.0222	146.5939

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	29.6387	1.7516	0.0000	73.4287
Unmitigated	29.6387	1.7516	0.0000	73.4287

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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

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	146.01	29.6387	1.7516	0.0000	73.4287
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		29.6387	1.7516	0.0000	73.4287

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	146.01	29.6387	1.7516	0.0000	73.4287
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		29.6387	1.7516	0.0000	73.4287

9.0 Operational Offroad

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

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
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Boilers

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

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT C

SDG&E GHG Energy Emission Factors with RPS

SDG&E GHG Energy Emission Factors with RPS

Year	RPS Achieved	Co2 Intensity	CH4 Intensity	N2O Intensity	
2020 Base Year	33.00%	539.98	0.0330	0.0040	
Any Year No RPS Included	0.0%	805.94	0.0493	0.0060	
2009	10.5%	721.32	0.0441	0.0053	
2020	33.0%	539.98	0.0330	0.0040	33% Required by Law
2021	35.7%	518.22	0.0317	0.0038	
2022	38.4%	496.46	0.0303	0.0037	
2023	41.1%	474.70	0.0290	0.0035	
2024	43.8%	452.94	0.0277	0.0034	
2025	46.5%	431.18	0.0264	0.0032	
2026	49.2%	409.42	0.0250	0.0030	
2027	51.9%	387.66	0.0237	0.0029	
2028	54.6%	365.90	0.0224	0.0027	
2029	57.3%	344.14	0.0210	0.0025	
2030	60.0%	322.38	0.0197	0.0024	60% Required by Law