AIR QUALITY ASSESSMENT

Passerelle Horse Ranch Creek
County of San Diego, CA

Lead Agency:

County of San Diego
Planning & Development Services
5510 Overland Avenue, Suite 110
San Diego, CA 92123

Prepared By:

Jeremy Louden
Ldn Consulting, Inc.
42428 Chisolm Trail
Murrieta, CA 92562

Prepared For:

REC Consultants
2442 Second Avenue
San Diego, CA 92101

November 2, 2023

TABLE OF CONTENTS

List of Figures

List of Tables

Attachments

LIST OF COMMON ACRONYMS

Air Quality Impact Assessments (AQIA)

Assembly Bill 32 (AB32)

California Air Resource Board (CARB)

California Ambient Air Quality Standards (CAAQS)

California Environmental Quality Act (CEQA)

Carbon Dioxide (CO_2)

Cubic Yards (CY)

Diesel Particulate Matter (DPM)

Environmental Protection Agency (EPA)

EPA Office of Air Quality Planning and Standards (OAQPS)

Hazardous Air Pollutants (HAPs)

Hydrogen Sulfide (H_2S)

International Residential Code (IRC)

Level of Service (LOS)

Low Carbon Fuel Standard (LCFS)

Methane (CH_4)

National ambient air quality standards (NAAQS)

Nitrous Oxide (N_2O)

North County Transit District (NCTD)

Reactive Organic Gas (ROG)

Regional Air Quality Strategy (RAQS)

San Diego Air Basin (SDAB)

San Diego Air Pollution Control District (SDAPCD)

South Coast Air Quality Management District (SCAQMD)

Specific Plan Area (SPA)

State Implementation Plan (SIP)

Toxic Air Contaminants (TACs)

Vehicle Miles Traveled (VMT)

EXECUTIVE SUMMARY

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) to construct up to 138 units. 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 and with an existing designation for professional office (PO-1 and PO-2) uses in the Specific Plan which could be developed with roughly 157,000 SF of professional office space. V

The originally approved Campus Park project was approved on May 11, 2011. As part of the Campus Park EIR an air quality analysis was prepared. The findings, which were approved and certified by the County of San Diego Board of Supervisors on May 11, 2011, indicated that the project would have short-term significant air quality impacts and would require the following mitigation measures:

- *Multiple applications of water during grading between dozer/scraper passes.*
- *Paving, chip sealing, or chemical stabilization of internal roadways after completion of grading.*
- *Use of sweepers or water trucks to remove "track-out" at any point of public street access.*
- *Termination of grading if winds exceed 25 mph.*
- *Stabilization of dirt storage piles by chemical binders, tarps, fencing, or other erosion control.*
- *Hydroseeding of graded residential lots, unless lots are developed immediately after grading.*
- *Use of low-sulfur fuels in construction equipment.*
- *Where possible, the Project has incorporated use of low-VOC coatings that meet the requirements of APCD Rule 67.0.*
- *The Project would require 10 percent of the construction fleet to use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters, and/or CARB certified Tier I, II, or III equipment.*

The proposed Project would maintain these mitigation measures. This air quality impact study has been completed to determine the air quality impacts associated with the proposed Project action. The Project site has been previously graded as part of the approved CPSP development. The Project site will only require utility trenching, paving, building construction and painting. Facility construction would likely start in early 2023 and be completed sometime in 2024. The first complete year of operations is expected in 2025. Based upon the construction findings, the proposed Project would not generate any significant direct impacts and consistent with the overall CPSP findings.

The proposed Project is governed by the Campus Park Specific Plan (CPSP) and the site is designated as Office Professional (OP). The proposed site is residential. As part of the CPSP EIR, operational air quality mitigation measures are identified for both non-residential and residential uses. Of note, this analysis assumed that each of the units had natural gas hearth options. The

mitigation measures for residential uses also required battery charging areas, efficiency upgrades beyond those required in 2011, as well as recycling requirements however, this analysis did not analyze reductions associated with anything beyond natural gas hearts. The complete list of required mitigation measures for Air Quality are identified in Chapter 8 of the CPSP EIR which is provided as ***Attachment B*** to this report. The proposed Project would not directly exceed County operational air quality significance level thresholds (SLT) and would not be required to implement measures beyond what is required within the CPSP for residential uses.

Cumulatively, the approved CPSP project buildout would generate significant unmitigable air quality impacts which are tied to vehicular traffic. Since the proposed Project would reduce daily ADT when compared to the CPSP for these two lots, the project would not conflict with CPSP operational impacts and would directly reduce operational emissions for these lots. Based on this, the proposed Project is less intense with respect to air quality emissions and would be consistent with the Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP).

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality analysis is to determine potential air quality impacts (if any) that may be created by construction, area or operational emissions (short term or long term) from the proposed Project. Should impacts from the proposed Project be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant.

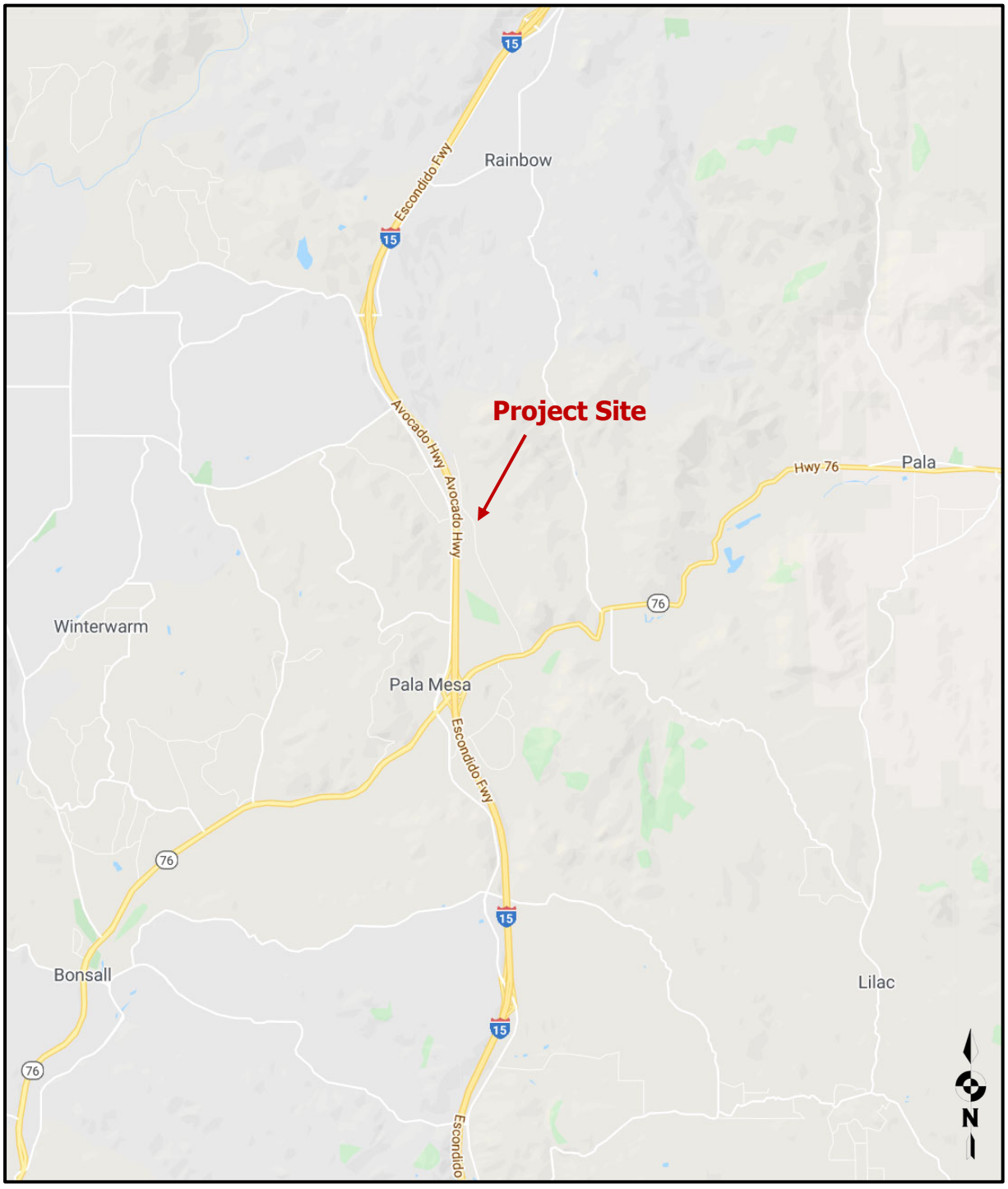
1.2 Project Location

The CPSP 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). 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. 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

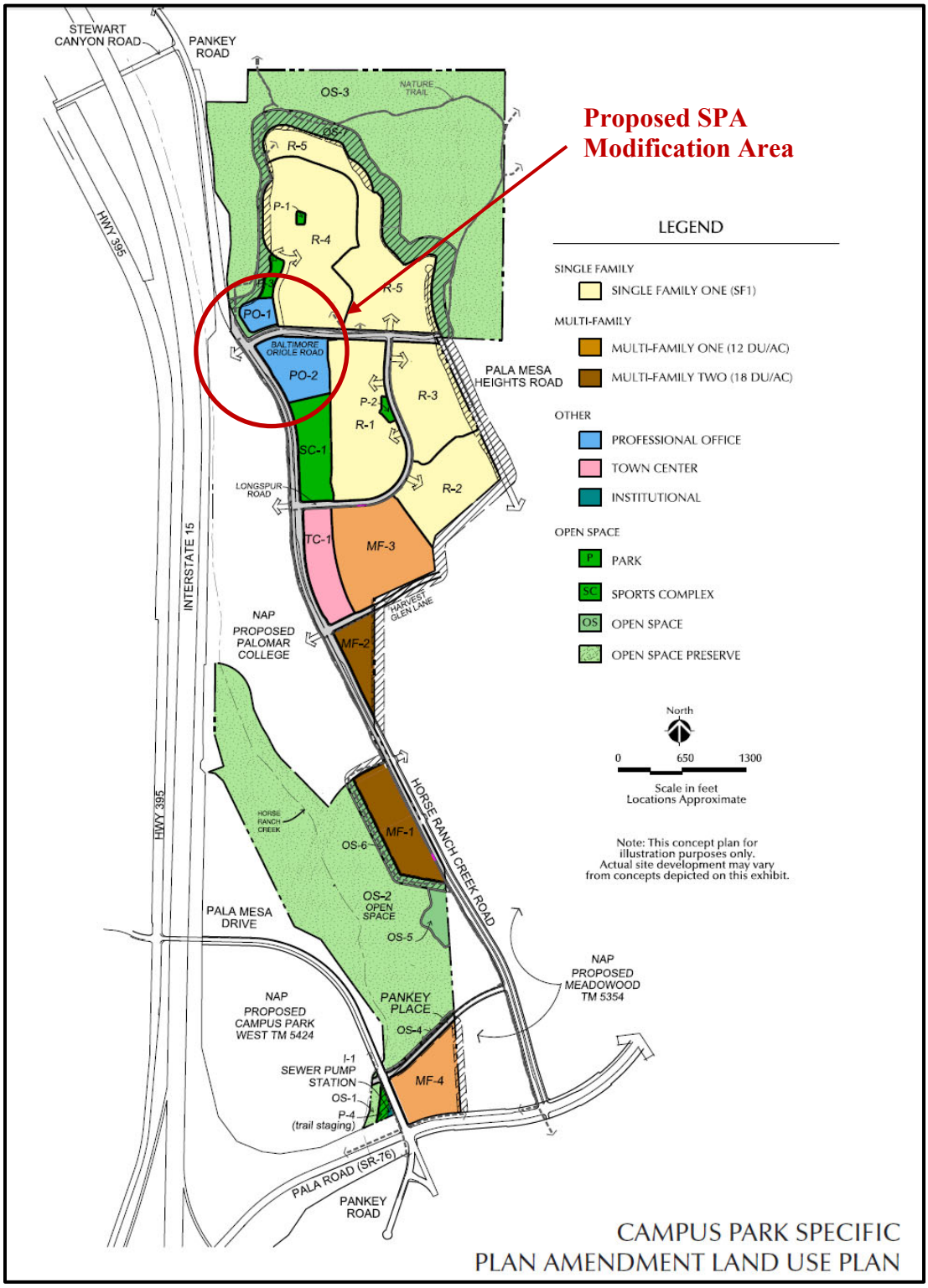
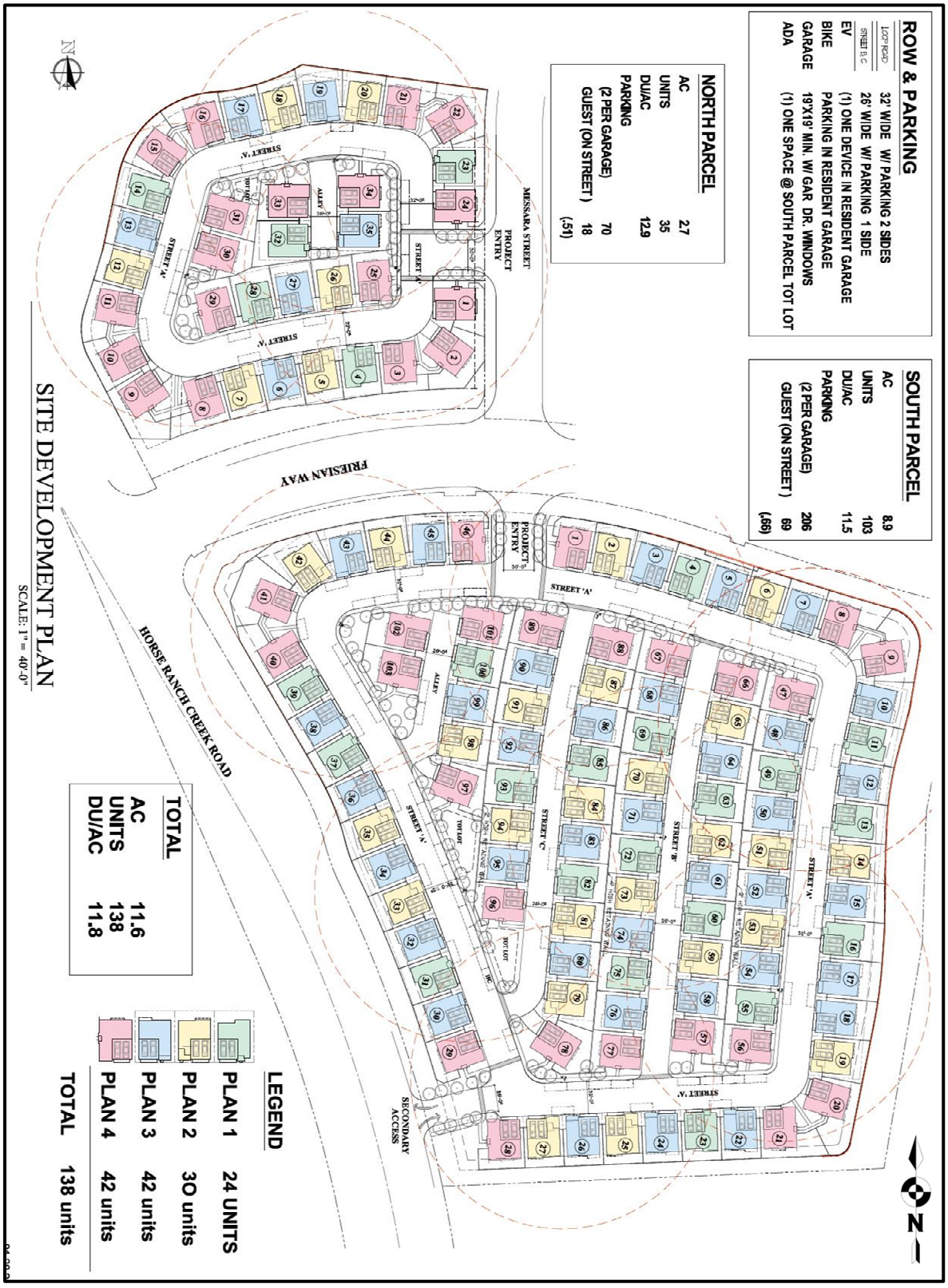


Figure 1-C: Proposed Project Site Layout



Source: (Bucilla Group Architecture Inc., 2022)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The 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)

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west 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 Campus Park area generally show daytime highs ranging between 67ºF in the winter to approximately 83ºF in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 44ºF in the winter to approximately 62ºF 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 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children and elderly. ***Secondary Standards*** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. ***Carbon Monoxide (CO):*** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. ***Lead (Pb):*** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. ***Nitrogen Dioxide (NO_2):*** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_2 is usually visible as a reddish-brown air layer over urban areas. NO_2 along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. ***Particulate Matter (PM_{10} or $PM_{2.5}$):*** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*
5. ***Ozone (O_3)****: is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*
6. ***Sulfur Dioxide (SO_2)****: is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.*

2.3.2 State Standards and Definitions

The State of California Air Resources Board (CARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive then the NAAQS with the exception of the 1-hr NO_2 standards which are stricter under the NAAQS. The CAAQS also restricts four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. ***Visibility Reducing Particles****: Particles in the Air that obstruct the visibility.*
2. ***Sulfates****: are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. ***Hydrogen Sulfide (H_2S)****: is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 Parts per Million (ppm)) can cause a loss of consciousness and possibly death.*
4. ***Vinyl Chloride****: also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.070 ppm (137 µg/m3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		-		
Fine Particulate Matter (PM2.5)[9]	24 Hour	No Separate State Standard		35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	12.0 µg/m3	15 µg/m3	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		-	-	-
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO_2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method)[9]
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10] (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 14				
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3 , as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (California Air Resources Board, 5/4/2016)

In August 2019, the U.S. EPA and the National Highway Traffic Safety Administration (NHSTA) 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 and Air Quality 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 CO_2 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 NO_2, PM_{10}, $PM_{2.5}$, and CO (CARB, 2019). Air Quality modeling software CalEEMod 2020.4.0 incorporates these requirements into the model.

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard and many areas are in non-attainment for PM_{10} as well. California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The San Diego County Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within the county. Therefore, the SDAPCD developed a RAQS to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NO_X). Currently, San Diego is in "non-attainment" status for federal and state O_3 and state PM_{10} and $PM_{2.5.}$ An attainment plan is available for O_3. The RAQS was adopted in

1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered NO_X and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NO_X reduction measures. NO_X and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 (SDAPCD, 2019).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the project produces unmitigable air quality emissions or if the project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

** The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.*
*** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.*
(SDAPCD, 2019)

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

A: Conflict with or obstruct implementation of the applicable air quality plan?
B: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
C: Expose sensitive receptors to substantial pollutant concentrations?
D: Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established recommended trigger levels in Rule 20.2 for new or modified stationary sources. Through the County's Guidelines for Determining Significance and Report Format and Content Requirements, the County has adopted these trigger levels as Screening Level Thresholds[1] (SLTs) for use in determining CEQA air quality impacts (County of San Diego, 2007). These SLTs can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. However, since SDAPCD does not have recommended trigger level for VOCs, the County has adopted the South Coast Air Quality Management District's (SCAQMD's) VOC threshold for the Coachella Valley.

Should emissions be found to exceed these County adopted SLTs, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These SLTs for construction and operational activities are shown in Table 2.3.

[1] County SLTs are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS. The federal and State ambient air quality standards, in turn, are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM_{10})	100
Respirable Particulate Matter ($PM_{2.5}$)	55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Reactive Organic Gases (ROG)	75
Operational Emissions	
Respirable Particulate Matter (PM_{10})	100
Respirable Particulate Matter ($PM_{2.5}$)	55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Reactive Organic Gases (ROG)	75
Note: The U.S. EPA uses the term VOC and CARB's Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact South Coast Air Quality Management District (SCAQMD) interchanges these words and because Air Quality models directly calculates ROG in place of VOC.	

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Camp Pendleton and Carmel Mountain Ranch monitoring stations which are located 10 and 25 miles from the Project site respectively. Table 2.4 identifies the criteria pollutants monitored at the aforementioned station.

Four additional sites collect meteorological data which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport. SDAPCD published the five-year air quality summary for all of the monitoring stations (SDAPCD, 2021).

Table 2.4: Two-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2019	2020	Days Exceeded over 2 years
O_3 (ppm)	Camp Pendleton or Carmel Mountain Ranch	1 Hour	0.09 ppm	No Standard	0.08	0.09	0
		8 Hour	0.070 ppm	0.070 ppm	0.06	0.07	3
PM_{10} (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	PM10 Data Not Available for Monitoring Sites near Project Site		
		Annual Arithmetic Mean	20 µg/m3	No Standard			
* $PM_{2.5}$ (µg/m^3)		24 Hour	No standard -	35 µg/m3	18.9	40.2	N/A
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	8.2	9.3	N/A
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.014	0.013	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.086	0.056	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	4.1	3.3	N/A
		8 Hour	9 ppm	9 ppm	2.5	1.7	N/A

Notes:
1. - Yearly maximums marked with "-" indicated data was not available for either monitoring station.
2. * Data was selected from the Carmel Mountain Ranch station which began in 2019. All other data presented was collected at the Camp Pendleton Monitoring Station.
3. SO_2 is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO_2 emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is 0.004 ppm and the most restrictive standard (CAAQS for SO_2) is 0.25 ppm.

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were previously calculated for the CPSP EIR which was approved in 2011. 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 multi-family residential development and 567 parking spaces. The facility footprint and construction would be similar to the proposed use. The project site has been previously graded so air quality emissions for this site would be primarily due to utility trenching, paving, facility construction and painting.

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. The CalEEMod input/output model is shown in ***Attachment A*** to this report.

It should be noted that the CPSP approved and certified by the County in 2011, indicated that the project would have unmitigable unavoidable short-term significant air quality impacts and would require the following mitigation measures to reduce air quality emissions. For purposes of this modification, none of the mitigation measures have been applied to the modeling, with the exception of the architectural coating regulated by Rule 67. Mitigation measures within the CPSP would be required for project implementation and are shown below (Development Design Services & GraphicAccess Inc., 2010).

- *Multiple applications of water during grading between dozer/scraper passes.*
- *Paving, chip sealing, or chemical stabilization of internal roadways after completion of grading.*
- *Use of sweepers or water trucks to remove "track-out" at any point of public street access.*
- *Termination of grading if winds exceed 25 mph.*
- *Stabilization of dirt storage piles by chemical binders, tarps, fencing, or other erosion control.*
- *Hydroseeding of graded residential lots, unless lots are developed immediately after grading.*
- *Use of low-sulfur fuels in construction equipment.*
- *Where possible, the Project has incorporated use of low-VOC coatings that meet the requirements of APCD Rule 67.0.*
- *The Project would require 10 percent of the construction fleet to use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters, and/or CARB certified Tier I, II, or III equipment.*

The Project construction dates were estimated based on a construction kickoff starting in 2022 with construction ending sometime in 2023. The Construction equipment and construction tasks are shown in Table 3.1.

Table 3.1: Expected Construction Equipment

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	01/13/2024	04/12/2024	
Air Compressors			1
This equipment list is based upon equipment inventory within CalEEMod and similar size projects in the County of San Diego.			

3.2 Operational Emissions

Operational air quality emission sources would include area sources such as landscaping, consumer products and architectural coatings during maintenance, energy sources from natural gas, mobile sources from vehicular traffic to include trucks and passenger vehicles, solid waste from trash generation, and water uses, which are calculated within CalEEMod.

The CPSP assumptions within the approved CEQA analysis for Parcels 1 and -2 would construct up to 157,000 SF of office professional uses. The proposed use seeks to construct a 138 unit multi-family residential development. A transportation analysis was prepared by the client for the project and the project was estimated to generate 1,380 average daily trips (ADT) whereas the previously proposed professional office was calculated to generate 2,669 ADT (Urban Systems Associates, Inc. , 2021). 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 us 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 is 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 1795 ADT or (1380+415) ADT and used within this Air Quality Assessment.

A trip reduction of 874 ADT would benefit the overall operational air quality emissions. Based on the approved CPSP Air Quality analysis traffic emissions are the largest reason that unmitigable air quality impacts are expected through buildout. The operational impact findings from the CPSP Air Quality analysis is shown below (Development Design Services & GraphicAccess Inc., 2010):

> *"Operational emissions would be associated with traffic accessing the Campus Park development, with area sources such as fireplaces, energy use, and landscaping. Based on the evaluation of air emissions, the project emissions would exceed the screening-level thresholds and would therefore pose a significant impact on the ambient air quality. Because the project's operational emissions are mainly associated with vehicular traffic from project-related vehicle trips, there are no feasible*

mitigation measures to reduce emissions below a level of significance. However, the project-related traffic would not result in CO "hot spots". Furthermore, emissions associated with traffic would decrease with time as older vehicles are phased out and more stringent emission standards are applied to new vehicles. With use of natural gas fireplaces in the residential development and decreases in vehicular emissions projected for future years, emissions would ultimately be below the County's significance thresholds and the project would not cause or contribute to a long-term exceedance of an air quality standard."

As part of the CPSP EIR, operational air quality mitigation measures are identified for both non-residential and residential uses. Of note, this analysis assumed that each of the units had natural gas hearth options. The mitigation measures for residential uses also required battery charging areas, efficiency upgrades beyond those required in 2011, as well as recycling requirements however, this analysis did not analyze reductions associated with anything beyond natural gas hearts. The complete list of required mitigation measures for Air Quality are identified in Chapter 8 of the CPSP EIR which is provided as ***Attachment B*** to this report.

3.3 Odor Impacts

Potential onsite odor generators would include short-term construction odors from activities such as paving and painting as well as construction equipment exhaust. Odors created during short-term construction activities would most likely be from the bitumen and solvents from the placement of hot asphalt and architectural coating. Paving activities would cause a less than significant impacts. The proposed Project is residential in nature which would not generate operational odors. Therefore, a less than significant odor impact is expected and is not further analyzed. It should be noted that these findings are the same as those concluded in the approved CPSA Air Quality analysis stated that *"odor impacts associated with the Proposed Project would not be significant"* (Development Design Services & GraphicAccess Inc., 2010).

4.0 FINDINGS

4.1 Construction Findings

Construction emissions in pounds per day from the construction activities and equipment, identified in Section 3.1 above, are shown in Table 4.1 below. Based on these numbers, the project would not exceed County SLTs directly and would not require additional mitigation beyond those required by the CPSP to comply directly. It should be noted that the CPSP development process will likely continue to generate emissions in excess of County SLTs as noted in the CPSP EIR. Given this, the project would be consistent with the original CPSP air quality findings and since the cumulative impacts would remain, all development within the CPSP including the proposed Project shall implement CPSP mitigation measures as identified in Section 3.1 of this analysis.

Table 4.1: Expected Construction Emissions Summary – Pounds per Day

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2023	2.32	16.92	23.85	0.06	2.81	0.73	3.53	0.75	0.68	1.43
2024	30.03	17.22	26.37	0.06	3.31	0.70	4.01	0.88	0.66	1.55
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
Impact?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

4.2 Operational Findings

Project Buildout and full operations are expected in 2025. Air Quality emissions for area sources, mobile, energy, water, and solid waste source emissions were estimated based on default inputs with the exception of mobile. A transportation analysis was prepared by the client for the project and the project was estimated to generate 1,380 average daily trips (ADT) whereas the previously proposed professional office was calculated to generate 2,669 ADT (Urban Systems Associates, Inc. , 2021). Based on the traffic analysis, the project would generate a net decrease of 1,289 ADT. However, after incorporating the 415 extra trips to account for the assumed internal reductions as identified in the original air and GHG sections to the 2011 EIR (SRA, 2010) a reduction of 874 ADT was utilized in this report.

A trip reduction of 874 ADT would benefit the overall operational air quality emissions. Based on the approved CPSP Air Quality analysis traffic emissions are the largest reason that unmitigable air quality impacts are expected through buildout.

The expected daily pollutant generation can be calculated utilizing the product of ADT and the expected emissions inventory which is calculated in the CALEEMOD 2020.4.0 modeling software. The daily pollutants for the proposed Project are calculated for summer and winter are shown in Tables 4.2 and 4.3, respectively.

Table 4.2: Expected Summer Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	4.14	2.42	12.41	0.02	0.25	0.25
Energy	0.03	0.25	0.11	0.00	0.02	0.02
Mobile	5.72	6.15	55.71	0.13	14.12	3.82
Total (Unmitigated)	**9.88**	**8.82**	**68.22**	**0.15**	**14.39**	**4.09**
County SLTs	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**
Daily pollutant generation assumes trip distances within CalEEMod. The final numbers are all rounded within Excel and are reported as rounded numbers.						

Table 4.3: Expected Winter Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	4.14	2.42	12.41	0.02	0.25	0.25
Energy	0.03	0.25	0.11	0.00	0.02	0.02
Mobile	5.62	6.65	56.59	0.12	14.12	3.83
Total (Unmitigated)	**9.79**	**9.33**	**69.10**	**0.14**	**14.39**	**4.09**
County SLTs	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**
Daily pollutant generation assumes trip distances within CalEEMod. The final numbers are all rounded within Excel and are reported as rounded numbers.						

Based upon these calculations, the proposed Project would not directly exceed County operational air quality SLTs and would not be required to implement mitigation measures to comply with CEQA. Cumulatively, the approved CPSP project buildout would generate significant unmitigable air quality impacts which are tied to vehicular traffic. Since the proposed Project would reduce daily ADT, the project would not conflict with CPSP operational impacts and would likely directly reduce operational impacts. The reason being is mobile emissions are the largest direct emission source to the total project emissions. Since the project reduces ADT from 2,669 ADT to a correct 1,795 ADT conservatively, a 32.8% reduction in mobile emissions would be expected when compared to the 157,000 SF office project ADT. Since Area and Energy emissions make up a smaller component of the total air

quality emissions a reduction of 32.8% of the projected mobile emissions from the 157,000 SF office space would indicate that the proposed project would have less than significant air quality impacts or increases to those already approved by the County in 2011 for the CPSP.

The proposed Project is governed by the CPSP and the site is designated as OP. The proposed site is residential. As part of the CPSP EIR, operational air quality mitigation measures are identified for both non-residential and residential uses. Of note, this analysis assumed that each of the units had natural gas hearth options. The mitigation measures for residential uses also required battery charging areas, efficiency upgrades beyond those required in 2011, as well as recycling requirements however, this analysis did not analyze reductions associated with anything beyond natural gas hearts. The complete list of required mitigation measures for Air Quality are identified in Chapter 8 of the CPSP EIR which is provided as ***Attachment B*** to this report. The proposed Project would not directly exceed County operational air quality significance level thresholds (SLT) and would not be required to implement measures beyond what is required within the CPSP for residential uses.

The proposed Project is governed by the CPSP and would not significantly change the approved air quality analysis. The project would reduce the total mobile air quality emissions from the 157,000 SF office space identified in the CPSP by 32.8% which ultimately reduce air quality emissions expected within the CPSP. The reduction would reduce long term air quality emissions currently accounted for by the county within the RAQS.

This report demonstrates that the proposed project The project would reduce ADT from the overall Since the project would reduce ADT and air quality emissions, the project would not conflict with the RAQS as is discussed in Section 2.3.3 of this analysis.

5.0 REFERENCES

Bucilla Group Architecture Inc. (2022). *Site Development Plan.*

California Air Resources Board. (5/4/2016). *www.arb.ca.gov.* Retrieved from Ambient Air Quality Standards: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

CARB. (2019). *EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One.* Retrieved from https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf

County of San Diego. (2007, March 19). *AQ-Guidelines.* Retrieved from https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf

Google. (2020). Retrieved 2020, from maps.google.com

SDAPCD. (2019). Retrieved 2018, from https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html

SDAPCD. (2021). *5 Year Summary 2016-2020.* Retrieved 2015, from https://www.sdapcd.org/content/dam/sdc/apcd/monitoring/5-Year_Air_Quality.pdf

SRA. (2010). *AIR QUALITY TECHNICAL REPORT AND GLOBAL CLIMATE CHANGE EVALUATION.*

Urban Systems Associates, Inc. . (2021). *Local Mobility Analysis - Passerelle Horse Ranch Creek.*

US EPA. (2018). *The Safer Affordable Fuel Efficient (SAFE) Vehicles 2021-2026.* Retrieved from https://www.govinfo.gov/content/pkg/FR-2018-09-26/pdf/2018-20962.pdf

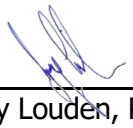
US EPA. (2020). *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks.* Retrieved from Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks

WRCC. (2016). *VISTA 2 NNE, CALIFORNIA (049378)*. Retrieved from https://wrcc.dri.edu/summary/Climsmsca.html: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9378

WRCC. (2018). Retrieved from https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg

6.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the proposed development. This report was prepared utilizing the latest emission rates and reduction methodologies. This report was prepared by Jeremy Louden; a County approved CEQA Consultant for Air Quality.



Jeremy Louden, Principal
Ldn Consulting, Inc.
(760) 473-1253
jlouden@ldnconsulting.net

Date November 2, 2023

ATTACHMENT A

CalEEMod 138 Unit Multi-Family Development

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

Passerelle 138 unit Detached Mulit-Family SPA

San Diego County, Summer

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
Apartments 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. Oniste 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 Mulit-Family SPA - San Diego County, Summer

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

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 Mulit-Family SPA - San Diego County, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	2.3226	16.9237	23.8453	0.0585	2.8093	0.7250	3.5342	0.7522	0.6821	1.4343	0.0000	5,834.4725	5,834.4725	0.7177	0.2010	5,911.5715
2024	30.0283	17.2225	26.3722	0.0648	3.3074	0.7014	4.0088	0.8843	0.6632	1.5476	0.0000	6,477.1294	6,477.1294	0.7051	0.2042	6,555.6079
Maximum	**30.0283**	**17.2225**	**26.3722**	**0.0648**	**3.3074**	**0.7250**	**4.0088**	**0.8843**	**0.6821**	**1.5476**	**0.0000**	**6,477.1294**	**6,477.1294**	**0.7177**	**0.2042**	**6,555.6079**

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	lb/day										lb/day					
2023	2.3226	16.9237	23.8453	0.0585	2.8093	0.7250	3.5342	0.7522	0.6821	1.4343	0.0000	5,834.4725	5,834.4725	0.7177	0.2010	5,911.5715
2024	30.0283	17.2225	26.3722	0.0648	3.3074	0.7014	4.0088	0.8843	0.6632	1.5476	0.0000	6,477.1294	6,477.1294	0.7051	0.2042	6,555.6079
Maximum	**30.0283**	**17.2225**	**26.3722**	**0.0648**	**3.3074**	**0.7250**	**4.0088**	**0.8843**	**0.6821**	**1.5476**	**0.0000**	**6,477.1294**	**6,477.1294**	**0.7177**	**0.2042**	**6,555.6079**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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	N20	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

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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	lb/day										lb/day					
Area	4.1387	2.4207	12.4063	0.0152		0.2484	0.2484		0.2484	0.2484	0.0000	2,942.9773	2,942.9773	0.0760	0.0536	2,960.8422
Energy	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
Mobile	5.7158	6.1495	55.7092	0.1282	14.0277	0.0946	14.1223	3.7366	0.0883	3.8249		13,390.5718	13,390.5718	0.8170	0.5222	13,566.6251
Total	**9.8842**	**8.8238**	**68.2233**	**0.1450**	**14.0277**	**0.3635**	**14.3912**	**3.7366**	**0.3572**	**4.0938**	**0.0000**	**16,657.1897**	**16,657.1897**	**0.8992**	**0.5818**	**16,853.0310**

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	lb/day										lb/day					
Area	4.1387	2.4207	12.4063	0.0152		0.2484	0.2484		0.2484	0.2484	0.0000	2,942.9773	2,942.9773	0.0760	0.0536	2,960.8422
Energy	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
Mobile	5.7158	6.1495	55.7092	0.1282	14.0277	0.0946	14.1223	3.7366	0.0883	3.8249		13,390.5718	13,390.5718	0.8170	0.5222	13,566.6251
Total	**9.8842**	**8.8238**	**68.2233**	**0.1450**	**14.0277**	**0.3635**	**14.3912**	**3.7366**	**0.3572**	**4.0938**	**0.0000**	**16,657.1897**	**16,657.1897**	**0.8992**	**0.5818**	**16,853.0310**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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	N20	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	
4	Architectural Coating	Architectural Coating	1/13/2024	4/12/2024	5	65	

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

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

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

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	lb/day										lb/day					
Off-Road	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298
Total	**0.3027**	**3.0714**	**4.4626**	**6.2300e-003**		**0.1516**	**0.1516**		**0.1395**	**0.1395**		**603.1530**	**603.1530**	**0.1951**		**608.0298**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

3.2 Trenching - 2023

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	lb/day										lb/day					
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
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
Worker	0.0177	0.0120	0.1751	5.6000e-004	0.0639	3.3000e-004	0.0642	0.0169	3.0000e-004	0.0172		57.2323	57.2323	1.2400e-003	1.2600e-003	57.6397
Total	**0.0177**	**0.0120**	**0.1751**	**5.6000e-004**	**0.0639**	**3.3000e-004**	**0.0642**	**0.0169**	**3.0000e-004**	**0.0172**		**57.2323**	**57.2323**	**1.2400e-003**	**1.2600e-003**	**57.6397**

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	lb/day										lb/day					
Off-Road	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395	0.0000	603.1530	603.1530	0.1951		608.0298
Total	**0.3027**	**3.0714**	**4.4626**	**6.2300e-003**		**0.1516**	**0.1516**		**0.1395**	**0.1395**	**0.0000**	**603.1530**	**603.1530**	**0.1951**		**608.0298**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

3.2 Trenching - 2023

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	lb/day										lb/day					
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
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
Worker	0.0177	0.0120	0.1751	5.6000e-004	0.0639	3.3000e-004	0.0642	0.0169	3.0000e-004	0.0172		57.2323	57.2323	1.2400e-003	1.2600e-003	57.6397
Total	**0.0177**	**0.0120**	**0.1751**	**5.6000e-004**	**0.0639**	**3.3000e-004**	**0.0642**	**0.0169**	**3.0000e-004**	**0.0172**		**57.2323**	**57.2323**	**1.2400e-003**	**1.2600e-003**	**57.6397**

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	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7008**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

3.3 Paving - 2023

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	lb/day										lb/day					
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
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
Worker	0.0531	0.0359	0.5254	1.6800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		171.6967	171.6967	3.7100e-003	3.7900e-003	172.9190
Total	**0.0531**	**0.0359**	**0.5254**	**1.6800e-003**	**0.1916**	**9.9000e-004**	**0.1926**	**0.0508**	**9.1000e-004**	**0.0517**		**171.6967**	**171.6967**	**3.7100e-003**	**3.7900e-003**	**172.9190**

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	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7008**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

3.3 Paving - 2023

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	lb/day										lb/day					
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
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
Worker	0.0531	0.0359	0.5254	1.6800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		171.6967	171.6967	3.7100e-003	3.7900e-003	172.9190
Total	**0.0531**	**0.0359**	**0.5254**	**1.6800e-003**	**0.1916**	**9.9000e-004**	**0.1926**	**0.0508**	**9.1000e-004**	**0.0517**		**171.6967**	**171.6967**	**3.7100e-003**	**3.7900e-003**	**172.9190**

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	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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 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	lb/day										lb/day					
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
Vendor	0.0594	2.0725	0.7714	9.7000e-003	0.3185	0.0123	0.3309	0.0917	0.0118	0.1035		1,047.2050	1,047.2050	0.0318	0.1517	1,093.2186
Worker	0.6905	0.4663	6.8299	0.0218	2.4907	0.0129	2.5036	0.6605	0.0119	0.6724		2,232.0576	2,232.0576	0.0482	0.0493	2,247.9469
Total	**0.7498**	**2.5388**	**7.6013**	**0.0315**	**2.8093**	**0.0252**	**2.8345**	**0.7522**	**0.0237**	**0.7759**		**3,279.2626**	**3,279.2626**	**0.0800**	**0.2010**	**3,341.1655**

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	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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 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	lb/day										lb/day					
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
Vendor	0.0594	2.0725	0.7714	9.7000e-003	0.3185	0.0123	0.3309	0.0917	0.0118	0.1035		1,047.2050	1,047.2050	0.0318	0.1517	1,093.2186
Worker	0.6905	0.4663	6.8299	0.0218	2.4907	0.0129	2.5036	0.6605	0.0119	0.6724		2,232.0576	2,232.0576	0.0482	0.0493	2,247.9469
Total	**0.7498**	**2.5388**	**7.6013**	**0.0315**	**2.8093**	**0.0252**	**2.8345**	**0.7522**	**0.0237**	**0.7759**		**3,279.2626**	**3,279.2626**	**0.0800**	**0.2010**	**3,341.1655**

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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0572	2.0584	0.7538	9.5200e-003	0.3185	0.0124	0.3309	0.0917	0.0118	0.1036		1,028.9450	1,028.9450	0.0325	0.1491	1,074.1857
Worker	0.6493	0.4180	6.3678	0.0211	2.4907	0.0123	2.5030	0.6605	0.0113	0.6718		2,175.8646	2,175.8646	0.0437	0.0459	2,190.6419
Total	**0.7065**	**2.4764**	**7.1216**	**0.0306**	**2.8093**	**0.0247**	**2.8340**	**0.7522**	**0.0232**	**0.7754**		**3,204.8096**	**3,204.8096**	**0.0762**	**0.1950**	**3,264.8276**

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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0572	2.0584	0.7538	9.5200e-003	0.3185	0.0124	0.3309	0.0917	0.0118	0.1036		1,028.9450	1,028.9450	0.0325	0.1491	1,074.1857
Worker	0.6493	0.4180	6.3678	0.0211	2.4907	0.0123	2.5030	0.6605	0.0113	0.6718		2,175.8646	2,175.8646	0.0437	0.0459	2,190.6419
Total	**0.7065**	**2.4764**	**7.1216**	**0.0306**	**2.8093**	**0.0247**	**2.8340**	**0.7522**	**0.0232**	**0.7754**		**3,204.8096**	**3,204.8096**	**0.0762**	**0.1950**	**3,264.8276**

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	lb/day										lb/day					
Archit. Coating	27.5396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**27.7204**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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 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	lb/day										lb/day					
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
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
Worker	0.1299	0.0836	1.2736	4.2200e-003	0.4982	2.4600e-003	0.5006	0.1321	2.2600e-003	0.1344		435.1729	435.1729	8.7300e-003	9.1900e-003	438.1284
Total	**0.1299**	**0.0836**	**1.2736**	**4.2200e-003**	**0.4982**	**2.4600e-003**	**0.5006**	**0.1321**	**2.2600e-003**	**0.1344**		**435.1729**	**435.1729**	**8.7300e-003**	**9.1900e-003**	**438.1284**

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	lb/day										lb/day					
Archit. Coating	27.5396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**27.7204**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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 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	lb/day										lb/day					
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
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
Worker	0.1299	0.0836	1.2736	4.2200e-003	0.4982	2.4600e-003	0.5006	0.1321	2.2600e-003	0.1344		435.1729	435.1729	8.7300e-003	9.1900e-003	438.1284
Total	**0.1299**	**0.0836**	**1.2736**	**4.2200e-003**	**0.4982**	**2.4600e-003**	**0.5006**	**0.1321**	**2.2600e-003**	**0.1344**		**435.1729**	**435.1729**	**8.7300e-003**	**9.1900e-003**	**438.1284**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.7158	6.1495	55.7092	0.1282	14.0277	0.0946	14.1223	3.7366	0.0883	3.8249		13,390.5718	13,390.5718	0.8170	0.5222	13,566.6251
Unmitigated	5.7158	6.1495	55.7092	0.1282	14.0277	0.0946	14.1223	3.7366	0.0883	3.8249		13,390.5718	13,390.5718	0.8170	0.5222	13,566.6251

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	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

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

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

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	lb/day										lb/day					
NaturalGas Mitigated	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
NaturalGas Unmitigated	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638

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	lb/day										lb/day					
Apartments Mid Rise	2750.94	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
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
Total		**0.0297**	**0.2535**	**0.1079**	**1.6200e-003**		**0.0205**	**0.0205**		**0.0205**	**0.0205**		**323.6406**	**323.6406**	**6.2000e-003**	**5.9300e-003**	**325.5638**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	2.75094	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
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
Total		**0.0297**	**0.2535**	**0.1079**	**1.6200e-003**		**0.0205**	**0.0205**		**0.0205**	**0.0205**		**323.6406**	**323.6406**	**6.2000e-003**	**5.9300e-003**	**325.5638**

6.0 Area Detail

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	lb/day										lb/day					
Mitigated	4.1387	2.4207	12.4063	0.0152		0.2484	0.2484		0.2484	0.2484	0.0000	2,942.9773	2,942.9773	0.0760	0.0536	2,960.8422
Unmitigated	4.1387	2.4207	12.4063	0.0152		0.2484	0.2484		0.2484	0.2484	0.0000	2,942.9773	2,942.9773	0.0760	0.0536	2,960.8422

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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	lb/day										lb/day					
Architectural Coating	0.4904					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.0335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2679	2.2892	0.9741	0.0146		0.1851	0.1851		0.1851	0.1851	0.0000	2,922.3529	2,922.3529	0.0560	0.0536	2,939.7190
Landscaping	0.3468	0.1315	11.4321	6.1000e-004		0.0633	0.0633		0.0633	0.0633		20.6243	20.6243	0.0200		21.1232
Total	**4.1387**	**2.4207**	**12.4063**	**0.0152**		**0.2484**	**0.2484**		**0.2484**	**0.2484**	**0.0000**	**2,942.9773**	**2,942.9773**	**0.0760**	**0.0536**	**2,960.8422**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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	lb/day										lb/day					
Architectural Coating	0.4904					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.0335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2679	2.2892	0.9741	0.0146		0.1851	0.1851		0.1851	0.1851	0.0000	2,922.3529	2,922.3529	0.0560	0.0536	2,939.7190
Landscaping	0.3468	0.1315	11.4321	6.1000e-004		0.0633	0.0633		0.0633	0.0633		20.6243	20.6243	0.0200		21.1232
Total	**4.1387**	**2.4207**	**12.4063**	**0.0152**		**0.2484**	**0.2484**		**0.2484**	**0.2484**	**0.0000**	**2,942.9773**	**2,942.9773**	**0.0760**	**0.0536**	**2,960.8422**

7.0 Water Detail

7.1 Mitigation Measures Water

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Summer

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

Passerelle 138 unit Detached Mulit-Family SPA

San Diego County, Winter

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
Apartments 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. Oniste 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 Mulit-Family SPA - San Diego County, Winter

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

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 Mulit-Family SPA - San Diego County, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	2.4004	17.0695	23.3735	0.0573	2.8093	0.7250	3.5343	0.7522	0.6821	1.4344	0.0000	5,712.3980	5,712.3980	0.7178	0.2053	5,790.8175
2024	30.1193	17.3722	25.8503	0.0634	3.3074	0.7014	4.0089	0.8843	0.6633	1.5476	0.0000	6,334.3917	6,334.3917	0.7068	0.2089	6,414.3282
Maximum	**30.1193**	**17.3722**	**25.8503**	**0.0634**	**3.3074**	**0.7250**	**4.0089**	**0.8843**	**0.6821**	**1.5476**	**0.0000**	**6,334.3917**	**6,334.3917**	**0.7178**	**0.2089**	**6,414.3282**

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	lb/day										lb/day					
2023	2.4004	17.0695	23.3735	0.0573	2.8093	0.7250	3.5343	0.7522	0.6821	1.4344	0.0000	5,712.3980	5,712.3980	0.7178	0.2053	5,790.8175
2024	30.1193	17.3722	25.8503	0.0634	3.3074	0.7014	4.0089	0.8843	0.6633	1.5476	0.0000	6,334.3917	6,334.3917	0.7068	0.2089	6,414.3282
Maximum	**30.1193**	**17.3722**	**25.8503**	**0.0634**	**3.3074**	**0.7250**	**4.0089**	**0.8843**	**0.6821**	**1.5476**	**0.0000**	**6,334.3917**	**6,334.3917**	**0.7178**	**0.2089**	**6,414.3282**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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	N20	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

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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	lb/day										lb/day					
Area	4.1387	2.4207	12.4063	0.0152		0.2484	0.2484		0.2484	0.2484	0.0000	2,942.9773	2,942.9773	0.0760	0.0536	2,960.8422
Energy	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
Mobile	5.6201	6.6547	56.5877	0.1226	14.0277	0.0947	14.1223	3.7366	0.0883	3.8250		12,804.0870	12,804.0870	0.8556	0.5487	12,988.9951
Total	**9.7885**	**9.3289**	**69.1018**	**0.1394**	**14.0277**	**0.3636**	**14.3912**	**3.7366**	**0.3572**	**4.0939**	**0.0000**	**16,070.7048**	**16,070.7048**	**0.9378**	**0.6082**	**16,275.4011**

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	lb/day										lb/day					
Area	4.1387	2.4207	12.4063	0.0152		0.2484	0.2484		0.2484	0.2484	0.0000	2,942.9773	2,942.9773	0.0760	0.0536	2,960.8422
Energy	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
Mobile	5.6201	6.6547	56.5877	0.1226	14.0277	0.0947	14.1223	3.7366	0.0883	3.8250		12,804.0870	12,804.0870	0.8556	0.5487	12,988.9951
Total	**9.7885**	**9.3289**	**69.1018**	**0.1394**	**14.0277**	**0.3636**	**14.3912**	**3.7366**	**0.3572**	**4.0939**	**0.0000**	**16,070.7048**	**16,070.7048**	**0.9378**	**0.6082**	**16,275.4011**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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	N20	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	
4	Architectural Coating	Architectural Coating	1/13/2024	4/12/2024	5	65	

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

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

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

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	lb/day										lb/day					
Off-Road	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298
Total	**0.3027**	**3.0714**	**4.4626**	**6.2300e-003**		**0.1516**	**0.1516**		**0.1395**	**0.1395**		**603.1530**	**603.1530**	**0.1951**		**608.0298**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

3.2 Trenching - 2023

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	lb/day										lb/day					
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
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
Worker	0.0198	0.0134	0.1624	5.3000e-004	0.0639	3.3000e-004	0.0642	0.0169	3.0000e-004	0.0172		54.0602	54.0602	1.2800e-003	1.3600e-003	54.4987
Total	**0.0198**	**0.0134**	**0.1624**	**5.3000e-004**	**0.0639**	**3.3000e-004**	**0.0642**	**0.0169**	**3.0000e-004**	**0.0172**		**54.0602**	**54.0602**	**1.2800e-003**	**1.3600e-003**	**54.4987**

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	lb/day										lb/day					
Off-Road	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395	0.0000	603.1530	603.1530	0.1951		608.0298
Total	**0.3027**	**3.0714**	**4.4626**	**6.2300e-003**		**0.1516**	**0.1516**		**0.1395**	**0.1395**	**0.0000**	**603.1530**	**603.1530**	**0.1951**		**608.0298**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

3.2 Trenching - 2023

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	lb/day										lb/day					
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
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
Worker	0.0198	0.0134	0.1624	5.3000e-004	0.0639	3.3000e-004	0.0642	0.0169	3.0000e-004	0.0172		54.0602	54.0602	1.2800e-003	1.3600e-003	54.4987
Total	**0.0198**	**0.0134**	**0.1624**	**5.3000e-004**	**0.0639**	**3.3000e-004**	**0.0642**	**0.0169**	**3.0000e-004**	**0.0172**		**54.0602**	**54.0602**	**1.2800e-003**	**1.3600e-003**	**54.4987**

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	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7008**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

3.3 Paving - 2023

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	lb/day										lb/day					
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
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
Worker	0.0592	0.0403	0.4872	1.5800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		162.1806	162.1806	3.8300e-003	4.0900e-003	163.4961
Total	**0.0592**	**0.0403**	**0.4872**	**1.5800e-003**	**0.1916**	**9.9000e-004**	**0.1926**	**0.0508**	**9.1000e-004**	**0.0517**		**162.1806**	**162.1806**	**3.8300e-003**	**4.0900e-003**	**163.4961**

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	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7008**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

3.3 Paving - 2023

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	lb/day										lb/day					
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
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
Worker	0.0592	0.0403	0.4872	1.5800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		162.1806	162.1806	3.8300e-003	4.0900e-003	163.4961
Total	**0.0592**	**0.0403**	**0.4872**	**1.5800e-003**	**0.1916**	**9.9000e-004**	**0.1926**	**0.0508**	**9.1000e-004**	**0.0517**		**162.1806**	**162.1806**	**3.8300e-003**	**4.0900e-003**	**163.4961**

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	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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 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	lb/day										lb/day					
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
Vendor	0.0575	2.1608	0.7960	9.7200e-003	0.3185	0.0124	0.3309	0.0917	0.0118	0.1036		1,048.8398	1,048.8398	0.0316	0.1521	1,094.9624
Worker	0.7701	0.5238	6.3334	0.0206	2.4907	0.0129	2.5036	0.6605	0.0119	0.6724		2,108.3484	2,108.3484	0.0498	0.0532	2,125.4491
Total	**0.8276**	**2.6846**	**7.1295**	**0.0303**	**2.8093**	**0.0253**	**2.8346**	**0.7522**	**0.0237**	**0.7760**		**3,157.1881**	**3,157.1881**	**0.0814**	**0.2053**	**3,220.4115**

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	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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 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	lb/day										lb/day					
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
Vendor	0.0575	2.1608	0.7960	9.7200e-003	0.3185	0.0124	0.3309	0.0917	0.0118	0.1036		1,048.8398	1,048.8398	0.0316	0.1521	1,094.9624
Worker	0.7701	0.5238	6.3334	0.0206	2.4907	0.0129	2.5036	0.6605	0.0119	0.6724		2,108.3484	2,108.3484	0.0498	0.0532	2,125.4491
Total	**0.8276**	**2.6846**	**7.1295**	**0.0303**	**2.8093**	**0.0253**	**2.8346**	**0.7522**	**0.0237**	**0.7760**		**3,157.1881**	**3,157.1881**	**0.0814**	**0.2053**	**3,220.4115**

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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0553	2.1463	0.7783	9.5300e-003	0.3185	0.0124	0.3310	0.0917	0.0119	0.1036		1,030.5972	1,030.5972	0.0323	0.1495	1,075.9441
Worker	0.7267	0.4695	5.9125	0.0199	2.4907	0.0123	2.5030	0.6605	0.0113	0.6718		2,055.5397	2,055.5397	0.0452	0.0496	2,071.4435
Total	**0.7820**	**2.6158**	**6.6908**	**0.0295**	**2.8093**	**0.0247**	**2.8340**	**0.7522**	**0.0232**	**0.7755**		**3,086.1368**	**3,086.1368**	**0.0776**	**0.1990**	**3,147.3876**

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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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
Vendor	0.0553	2.1463	0.7783	9.5300e-003	0.3185	0.0124	0.3310	0.0917	0.0119	0.1036		1,030.5972	1,030.5972	0.0323	0.1495	1,075.9441
Worker	0.7267	0.4695	5.9125	0.0199	2.4907	0.0123	2.5030	0.6605	0.0113	0.6718		2,055.5397	2,055.5397	0.0452	0.0496	2,071.4435
Total	**0.7820**	**2.6158**	**6.6908**	**0.0295**	**2.8093**	**0.0247**	**2.8340**	**0.7522**	**0.0232**	**0.7755**		**3,086.1368**	**3,086.1368**	**0.0776**	**0.1990**	**3,147.3876**

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	lb/day										lb/day					
Archit. Coating	27.5396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**27.7204**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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 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	lb/day										lb/day					
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
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
Worker	0.1454	0.0939	1.1825	3.9900e-003	0.4982	2.4600e-003	0.5006	0.1321	2.2600e-003	0.1344		411.1079	411.1079	9.0500e-003	9.9100e-003	414.2887
Total	**0.1454**	**0.0939**	**1.1825**	**3.9900e-003**	**0.4982**	**2.4600e-003**	**0.5006**	**0.1321**	**2.2600e-003**	**0.1344**		**411.1079**	**411.1079**	**9.0500e-003**	**9.9100e-003**	**414.2887**

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	lb/day										lb/day					
Archit. Coating	27.5396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**27.7204**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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 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	lb/day										lb/day					
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
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
Worker	0.1454	0.0939	1.1825	3.9900e-003	0.4982	2.4600e-003	0.5006	0.1321	2.2600e-003	0.1344		411.1079	411.1079	9.0500e-003	9.9100e-003	414.2887
Total	**0.1454**	**0.0939**	**1.1825**	**3.9900e-003**	**0.4982**	**2.4600e-003**	**0.5006**	**0.1321**	**2.2600e-003**	**0.1344**		**411.1079**	**411.1079**	**9.0500e-003**	**9.9100e-003**	**414.2887**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.6201	6.6547	56.5877	0.1226	14.0277	0.0947	14.1223	3.7366	0.0883	3.8250		12,804.0870	12,804.0870	0.8556	0.5487	12,988.9951
Unmitigated	5.6201	6.6547	56.5877	0.1226	14.0277	0.0947	14.1223	3.7366	0.0883	3.8250		12,804.0870	12,804.0870	0.8556	0.5487	12,988.9951

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	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

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

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

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	lb/day										lb/day					
NaturalGas Mitigated	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
NaturalGas Unmitigated	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638

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	lb/day										lb/day					
Apartments Mid Rise	2750.94	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
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
Total		**0.0297**	**0.2535**	**0.1079**	**1.6200e-003**		**0.0205**	**0.0205**		**0.0205**	**0.0205**		**323.6406**	**323.6406**	**6.2000e-003**	**5.9300e-003**	**325.5638**

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	2.75094	0.0297	0.2535	0.1079	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.6406	323.6406	6.2000e-003	5.9300e-003	325.5638
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
Total		**0.0297**	**0.2535**	**0.1079**	**1.6200e-003**		**0.0205**	**0.0205**		**0.0205**	**0.0205**		**323.6406**	**323.6406**	**6.2000e-003**	**5.9300e-003**	**325.5638**

6.0 Area Detail

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	lb/day										lb/day					
Mitigated	4.1387	2.4207	12.4063	0.0152		0.2484	0.2484		0.2484	0.2484	0.0000	2,942.9773	2,942.9773	0.0760	0.0536	2,960.8422
Unmitigated	4.1387	2.4207	12.4063	0.0152		0.2484	0.2484		0.2484	0.2484	0.0000	2,942.9773	2,942.9773	0.0760	0.0536	2,960.8422

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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	lb/day										lb/day					
Architectural Coating	0.4904					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.0335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2679	2.2892	0.9741	0.0146		0.1851	0.1851		0.1851	0.1851	0.0000	2,922.3529	2,922.3529	0.0560	0.0536	2,939.7190
Landscaping	0.3468	0.1315	11.4321	6.1000e-004		0.0633	0.0633		0.0633	0.0633		20.6243	20.6243	0.0200		21.1232
Total	**4.1387**	**2.4207**	**12.4063**	**0.0152**		**0.2484**	**0.2484**		**0.2484**	**0.2484**	**0.0000**	**2,942.9773**	**2,942.9773**	**0.0760**	**0.0536**	**2,960.8422**

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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	lb/day										lb/day					
Architectural Coating	0.4904					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.0335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2679	2.2892	0.9741	0.0146		0.1851	0.1851		0.1851	0.1851	0.0000	2,922.3529	2,922.3529	0.0560	0.0536	2,939.7190
Landscaping	0.3468	0.1315	11.4321	6.1000e-004		0.0633	0.0633		0.0633	0.0633		20.6243	20.6243	0.0200		21.1232
Total	**4.1387**	**2.4207**	**12.4063**	**0.0152**		**0.2484**	**0.2484**		**0.2484**	**0.2484**	**0.0000**	**2,942.9773**	**2,942.9773**	**0.0760**	**0.0536**	**2,960.8422**

7.0 Water Detail

7.1 Mitigation Measures Water

Passerelle 138 unit Detached Mulit-Family SPA - San Diego County, Winter

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Passerelle 138 unit Detached Mulit-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 Mulit-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
Apartments 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. Oniste 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 Mulit-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

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 Mulit-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 Mulit-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	N20	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 Mulit-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 Mulit-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	N20	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	

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	

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

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 Mulit-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 Mulit-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 Mulit-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**

Passerelle 138 unit Detached Mulit-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 - 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**

Passerelle 138 unit Detached Mulit-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 - 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 Mulit-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 Mulit-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 Mulit-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**

Passerelle 138 unit Detached Mulit-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

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**

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

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	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

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

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**

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 Mulit-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 Mulit-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 Mulit-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 Mulit-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 Mulit-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 Mulit-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 Mulit-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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT B

Chapter 8 of the CPSP EIR – List of Mitigation Measures and Environmental Design Considerations

CHAPTER 8.0

LIST OF MITIGATION MEASURES AND ENVIRONMENTAL DESIGN CONSIDERATIONS

CHAPTER 8.0 – LIST OF MITIGATION MEASURES AND ENVIRONMENTAL DESIGN CONSIDERATIONS

Comprehensive Listing of Mitigation Measures

Mitigation for Transportation and Circulation Impacts

M-TR-1 Direct impacts to SR 76 from I-15 SB ramps to I-15 NB ramps shall be mitigated by Project Applicant construction of a loop on-ramp at the intersection of SR 76/I-15 SB ramps and restriping of the bridge to four lanes.

Direct impacts to other segments of SR 76 shall require the following mitigation:

• SR 76 from South Mission Road to Gird Road	Under TransNet SR 76 Widening, SR 76 shall be widened to four lanes. Due to timing considerations, the Project Applicant would require a Statement of Overriding Considerations if the Proposed Project is occupied before TransNet improvements.
• SR 76 from Sage Road to Old Highway 395	Under TransNet SR 76 Widening, SR 76 shall be widened to four lanes. Due to timing considerations, the Project Applicant would require a Statement of Overriding Considerations if the Proposed Project is occupied before TransNet improvements.
• SR 76 from Horse Ranch Creek Road to Couser Canyon Road	Under Caltrans, SR 76 shall be widened to four lanes. Due to timing considerations, the Project Applicant would require a Statement of Overriding Considerations if the Proposed Project is occupied before Caltrans improvements.

M-TR-2 Direct impacts to the SR 76 /I-15 NB ramps signalized intersection shall be mitigated by Project Applicant construction of an EB to NB loop ramp and restriping of the bridge to four through lanes (two lanes in each direction). A NB right-turn lane and WB right-turn lane shall be added to the SR 76 and I-15 NB on- and off-ramps.

M-TR-3 Direct impacts to the Old Highway 395/Reche Road unsignalized intersection shall be mitigated by Project Applicant installation of a traffic signal.

M-TR-4 Existing Plus Cumulative Plus Project impacts to roadway segments listed below shall be mitigated through Project Applicant participation in the Transportation Impact Fee (TIF) Program:

- Old Highway 395 from East Mission Road to West Lilac Road
- Reche Road from Green Canyon Norte to Gird Road
- Pankey Road from SR 76 to Shearer Crossing
- Pala Mesa Drive from Wilt Road/Sage Road to Old Highway 395

M-TR-5 Existing Plus Cumulative Plus Project impacts to segments of SR 76 listed below shall be mitigated through Project Applicant participation in the TIF Program:

- Melrose Drive to Old Highway 395
- I-15 SB ramps to I-15 NB ramps
- Horse Ranch Creek Road to Pala Mission Road

M-TR-6 Existing Plus Cumulative Plus Project impacts to the signalized intersections listed below shall be mitigated through Project Applicant participation in the TIF Program:

- SR 76/Gird Road
- SR 76/Old Highway 395
- SR 76/I-15 SB ramp
- SR 76/I-15 NB ramp
- Mission Road/Old Highway 395
- Mission Road/I-15 SB ramps
- Mission Road/I-15 NB ramp
- SR 76/Melrose Drive
- SR 76/East Vista Way
- SR 76/North River Road
- SR 76/Olive Hill Road
- SR 76/South Mission Road

M-TR-7 Existing Plus Cumulative Plus Project impacts to the unsignalized intersections shall be mitigated through Project Applicant participation in the TIF Program:

- SR 76/Via Monserate
- SR 76/Sage Road
- Old Highway 395/Dulin Road
- SR 76/Pankey Road
- SR 76/Rice Canyon Road
- SR 76/Couser Canyon Road
- Old Highway 395/Pala Mesa Drive
- Old Highway 395/Stewart Canyon Road
- Old Highway 395/Reche Road
- Reche Road/Live Oak Park Road

M-TR-8 Buildout (Year 2030) Plus Project impacts to roadway segments listed below shall be mitigated through Project Applicant participation in the TIF Program:

- Pankey Road from SR 76 to Shearer Crossing (suggested mitigation: widen roadway to four-lane collector)

In response to community concerns raised at Planning Group Meetings, the Project Applicant is also proposing an alternative mitigation approach for the cumulative and buildout (Year 2030) impacts addressed in M-TR-6 through M-TR-8, above, in conjunction with TIF payments. This alterative proposal is presented as M-TR-6a to 8a, below.

M-TR-6a to 8a

Existing Plus Cumulative Plus Project and Buildout (Year 2030) Plus Project impacts to signalized and unsignalized intersections, as well as roadway segments, would be mitigated through the Project Applicant allocating the monies identified as TIF payments for the Proposed Project to design and construct specific intersection improvements, thereby providing the community with completed intersection upgrades when needed rather than waiting until all the TIF payments by others are collected and design efforts are completed. The improvements completed by the ProjectApplicant under this scenario include:

- SR 76/Old Highway 395 — Project Applicant shall construct NB to WB and SB to EB left-turn lanes, and complete signal modifications.
- Old Highway/Pala Mesa Drive — Project Applicant shall install a traffic signal and construct additional NB and SB through lanes and EB to NB and WB to SB left-turn lanes.
- Old Highway 395/ Stewart Canyon Road — Project Applicant shall install a traffic signal and add a WB to SB left-turn lane.
- SR 76/Pala Mesa Drive — Project Applicant shall install a traffic signal and add NB to WB and SB to EB left-turn lanes.

Mitigation for Noise Impacts

On-site Exterior Noise

M-N-1 Nine-foot high noise attenuation barriers shall be constructed along the property boundaries of lots 285 through 301 within PA R-4 (Figure 3.1-10, Location of Noise Attenuation Barriers).

The designed noise screening may only be accomplished if the barrier weight is at least 3.5 pounds per square foot of face area and if barriers have no decorative cutouts or line-of-site openings between shielded areas and the roadways. All gaps (except for weep holes) should be filled with grout or caulking. Recommended noise attenuation barriers may be constructed using one of the following alternative materials:

1. Masonry block;
2. Stucco veneer over wood framing (or foam core), or one-inch-thick tongue and groove wood of sufficient weight per square foot;

3. Glass (¼ inch thick), or other transparent material with sufficient weight per square foot;
4. Earthen berm; and/or
5. Any combination of these construction materials.

M-N-2 Ten-foot high noise attenuation barriers shall be constructed along the property boundaries of lots 21 through 52 within PA R-1 (Figure 3.1-10). The barriers shall be designed as stated above in M-N-1.

M-N-3 Outdoor balconies of the residences adjacent to Horse Ranch Creek Road and the two southernmost units within PA MF-1 shall require six-foot high noise attenuation barriers (Figure 3.1-10). The barriers shall be designed as stated above in items 2 and/or 3 of M-N-1.

M-N-4 Ten-foot high noise attenuation barriers shall be constructed along portions of MF-2 that front Horse Ranch Creek Road and Harvest Glen Lane (Figure 3.1-10). The barriers shall be designed as stated above in M-N-1.

M-N-5 Ten-foot high noise attenuation barriers shall be constructed along portions of MF-3 that front the Town Center and a portion of Longspur Road (Figure 3.1-10). The barriers shall be designed as stated above in M-N-1.

M-N-6 Eight-foot high noise attenuation barriers shall be constructed along portions of MF-4 that front Pala Mesa Drive and Pankey Place and 10-foot high noise attenuation barriers shall be constructed along portions of MF-4 that front SR 76 (Figure 3.1-10). The barriers shall be designed as stated above in M-N-1.

On-site Interior Noise

M-N-7 A final noise study for the second floors of all single- and multi-family homes on the Project site shall be prepared prior to obtaining building permits for the Project. The report shall finalize the noise requirements based on actual building design specifications. Noise requirements will include the following:

- A "windows closed" condition shall be provided that requires a means of mechanical ventilation for the second floors of all single- and multi-family houses.
- The second floors of all single- and multi-family houses shall be provided with weather-stripped solid-core exterior doors.
- Exterior wall/roof assembles shall be free of cutouts and openings.
- Upgraded windows shall be provided for the second floors of single- and multi-family houses.

Preliminary exterior and interior noise requirements for tentative tract map approval shall be presented in the final noise report.

Park Areas

M-N-8 Nine-foot high noise attenuation barriers shall be constructed along the western side of the northern half of PA P-3 (Figure 3.1-10). The barriers shall be designed as stated above in M-N-1.

Sewer Lift Station

M-N-9 The generators shall be located in a cinder block building that utilizes acoustical louvers to decrease the noise level to the adjacent property lines. The louvers shall be placed on the vent openings on the southern side of the building. The sides of the building facing east, north, and west shall be completely free of any openings or ventilation. Sound level measurements shall be conducted at the nearest property line once the pump stations are fully operational to ensure compliance with the County's Noise Ordinance.

Construction Noise

M-N-10a and b

A specific mitigation plan based upon the location of the construction equipment and/or blasting activities shall be identified by a County-approved acoustical engineer. If construction noise impacts are anticipated, the Project Applicant shall install a temporary noise attenuation barrier along any property line, or at an appropriate location (e.g., between newly constructed and occupied housing and later phases of construction). The mitigation plan shall determine the height and location of any necessary temporary barriers based on elevations of the construction area relative to the sensitive receptor and specific types of equipment being used. The barrier shall be constructed of solid non-gapping wood and shall comply with the County's 75 dBA standard and Noise Ordinance criteria for construction operations.

Cumulative Noise

M-N-11 Cumulative impacts associated with construction to future on-site residences would be mitigated by the implementation of Mitigation Measure M-N-10a and b.

Mitigation for Geology/Paleontology Impacts

Geology

A detailed geotechnical analysis (including efforts such as additional field investigation, borings, sampling, and laboratory testing) shall be conducted prior to implementation of the Proposed Project, with this analysis to include review of Project grading plans and assessment of associated potential impacts from landslides, liquefaction, and settlement/collapse. While the final determination of measures to address these potential hazards would be based on site-specific conditions, grading plans and geotechnical analysis, they likely would include the following types of efforts (as well as conformance with applicable standards such as the IBC) to reduce potential adverse geologic impacts below a level of significance.

Landslide Hazards

Potential measures to address impacts from landslide hazards include the following:

M-GE-1 If potentially unstable landslide deposits or outcrops (e.g., debris flows) are encountered during geotechnical investigation or Project construction, they shall be remediated per direction by the Project Geotechnical Engineer (e.g., by additional grading).

Liquefaction

Potential measures to address impacts from liquefaction and related hazards include the following:

M-GE-2a Deposits subject to potential liquefaction hazards shall be overexcavated and recompacted (or replaced with engineered fill), per direction by the Project Geotechnical Engineer.

M-GE-2b In-place ground modifications (densification) of applicable deposits shall be conducted via methods such as "cement deep soil mixing," placement of vibra-stone columns within wick drains, compaction grouting, or dynamic compaction, per direction by the Project Geotechnical Engineer.

M-GE-2c Subexcavation/recompaction or pre-settling procedures shall be implemented under the raised embankment areas for the proposed Pala Mesa Drive roadway to address potential settlement that otherwise might adversely impact the pavement and infrastructure located within the roadway.

M-GE-2d Confining stresses shall be increased through design (PSE 2000), and subdrains shall be placed in appropriate locations to reduce surficial saturation, per direction by the Project Geotechnical Engineer.

Settlement/Collapse

Potential measures to address impacts from settlement/collapse of surficial materials include the following:

M-GE-3a Implementation of densification measures as described above for potential liquefaction hazards.

M-GE-3b Surcharging of fill (e.g., temporary loading with stockpiled fill) and allowance of appropriate time delays (i.e., to facilitate 90 percent settlement) shall be implemented in applicable areas, per direction by the Project Geotechnical Engineer.

M-GE-3c Wick and blanket drains shall be installed in applicable locations, per direction by the Project Geotechnical Engineer.

Paleontological Resources

The following mitigation measures shall be implemented to ensure that potential adverse impacts to paleontological resources from implementation of the proposed project would be reduced below a level of significance. Evidence shall be provided to the Director of DPLU that the following notes have been placed on grading plan:

M-P-1a A qualified paleontologist shall be at the pre-construction meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual having an M.S. or Ph.D. in paleontology or a related field (e.g., sedimentary or stratagraphic geology, evolutionary biology, etc.), and who has knowledge of San Diego County paleontology and documented experience in professional paleontological procedures and techniques.

M-P-1b The qualified paleontologist shall conduct or supervise the following mitigation tasks associated with full-time monitoring during original cutting of previously undisturbed deposits of moderate paleontological resource sensitivity (i.e., Quaternary river terrace deposits):

1. Monitoring of excavation operations to discover unearthed fossil remains, generally involving monitoring of ongoing excavation activities such as sheet grading pads, cutting slopes and roadways, basement and foundation excavations, and trenching.

2. Salvage of unearthed fossil remains, typically involving simple excavation of the exposed specimens, but possibly also plaster-jacketing of individual large and/or fragile specimens, or more elaborate quarry excavation of richly fossiliferous deposits.

3. Recording of stratigraphic, geologic and geographic data to provide a context for the recovered fossil remains, including accurate plotting (mapping) on grading plans and standard topographic maps of all fossil localities, description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section (unless considered infeasible by the qualified paleontologist), and photographic documentation of the geologic setting.

4. Laboratory preparation (cleaning and repair) of collected fossil remains to the point of identification (not exhibition), generally involving removal of enclosing sedimentary rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens.

5. Curation of prepared fossil remains, typically involving scientific identification and cataloging of specimens, and entry of data into one or more accredited institutional (museum or university) collection (specimen/species lot and/or locality) databases.

6. Transferral, for archival storage, of cataloged fossil remains and copies of relevant field notes, maps, stratigraphic sections and photographs to an accredited institution (museum or university) in California that maintains paleontological collections. Preferably, this institution will consist of one of the following: (1) San Diego Natural History Museum; (2) Los Angeles County Museum; (3) San Bernardino Museum of Natural History; (4) University of California at Berkeley Museum of Paleontology; or (5) Anza-Borrego Desert State Park.

7. Preparation of a final report summarizing the results of the field investigation, laboratory methods, stratigraphic information, types and importance of collected fossils, and any necessary graphics to document the stratigraphy and precise fossil collection localities.

The following conditions shall be included as notes on the Project grading plans:

M-P-1c A qualified paleontologist or paleontological monitor (under the supervision of the qualified paleontologist) shall be on site on a full-time basis during the original cutting of previously undisturbed deposits of moderate paleontological resource sensitivity (i.e., Quaternary river terrace deposits) to inspect exposures for contained fossils. A paleontological monitor is defined as an individual with at least one year of experience in field identification and collection of fossil materials.

The Project applicant shall: (1) submit a copy of a letter signed by the qualified paleontologist or paleontological monitor which states that the applicant has retained their services and acknowledges agreement to perform and/or be responsible for concurrence with the Project mitigation measures; and (2) authorize the qualified paleontologist to direct,

divert, or halt any grading activity, and to perform all other acts required by the provisions listed below. If the qualified paleontologist or paleontological monitor ascertains that the river terrace deposits are not fossil bearing, the qualified paleontologist shall have the authority to terminate the monitoring program.

1. Monitor all grading and excavation activities in previously undisturbed deposits of moderate paleontological resource sensitivity (i.e., Quaternary river terrace deposits).

2. If paleontological resources are unearthed, the qualified paleontologist or paleontological monitor shall:

    a. Direct, divert, or halt any grading or excavation activity until such time that the sensitivity of the resource can be determined and the appropriate recovery implemented.

    b. Salvage unearthed fossil remains, including simple excavation of exposed specimens, or, if necessary, plaster-jacketing of individual large and/or fragile specimens or more elaborate quarry excavation of richly fossiliferous deposits.

    c. Record stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including a detailed description of all paleontological localities within the project site, as well as the lithology of fossil-bearing strata within the measured stratigraphic section, if feasible, and photographic documentation of the geologic setting.

    d. Prepare collected fossil remains for curation, including cleaning the fossils by removing the enclosing rock material, stabilizing fragile specimens using glues or other hardeners, if necessary, and repairing broken specimens.

    e. Curate, catalog and identify all fossil remains to the lowest taxon possible, inventory specimens, assign catalog numbers, and enter the appropriate specimen and locality data into a collection database.

    f. Transfer the cataloged fossil remains to an accredited institution (museum or university) in California that maintains paleontological collections for archival storage and/or display. The transfer shall include copies of relevant field notes, maps, stratigraphic sections, and photographs.

3. The qualified paleontologist shall prepare a final Paleontological Resources Mitigation Report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.

4. Two hard copies of the final Paleontological Resources Mitigation Report shall be submitted to the Director of DPLU for final approval of the mitigation, and one electronic copy of the final Paleontological Resources Mitigation Report shall be submitted to the Director of DPLU according to the County DPLU's Electronic Submittal Format Guidelines.

Mitigation for Biological Resources Impacts

The mitigation outlined below for direct impacts to on- and off-site habitats includes preservation both on and off site, off-site creation of habitat, and on-site enhancement of habitat. Appendix I of the Biological Technical Report (EIR Appendix G) contains the conceptual mitigation plans for the Project, including the Off-site Wetland Revegetation Plan (REC 2009b) and the On-site Wetland Enhancement Plan (REC 2009c). A conceptual RMP (REC 2009d; Appendix G of EIR Appendix G) also was prepared for the Proposed Project, and discusses short- and long-term management of the habitat to be preserved on site.

Wetland habitats, including southern riparian forest, southern willow scrub, and freshwater marsh are proposed to be mitigated through off-site creation of wetland habitat and on-site enhancement of existing wetland habitat. The Off-site Wetland Revegetation Plan and the On-site Wetland Enhancement Plan detail the feasibility, site selection criteria, and success criteria to achieve mitigation. The site selected for off-site creation must, at a minimum:

1. Be within a mitigation bank or be any other land deemed acceptable to the Director of DPLU;
2. Be approved by the appropriate state and federal resource agencies as part of the wetland permitting process under separate permit authority;
3. Have the ability to create at least 10.7 acres of southern riparian forest, 1.66 acres of southern willow scrub, and 7.9 acres of freshwater marsh at the completion of all impacts (acreages may be implemented in increments based on mitigation phasing);
4. Mitigate for other habitat considered important regionally. If such habitat is removed, the Applicant must provide mitigation for such impacts;
5. Be selected based on (1) its hydrological regime, (2) its ability to be protected from future impacts, and (3) existing habitat on site, as well as adjacent habitat;
6. Provide for adequate hydrology to support hydrophytic plant species, either through surface water and/or groundwater;
7. Not be prone to scour or sedimentation;
8. Provide soils that enhance the establishment of wetland habitat; and
9. Be located within the same watershed as the San Luis Rey River to the greatest extent practicable.

Once the off-site creation area is selected it must be described in detail in a Final Revegetation Plan.

Upland habitats that would be impacted by the Project, including coast live oak woodland, Diegan coastal sage scrub, non-native grassland, and pasture, are proposed to be mitigated through on- and off-site preservation. The off-site preservation location(s) preferably would occur within the watershed of the San Luis Rey River. Site(s) shall be approved by the Director of DPLU. On-site preservation management is addressed within the Project RMP. Off-site preservation management will be addressed once a site is selected. A separate RMP will be required for off-site mitigation.

Mitigation (i.e., preservation of open space) would occur upon issuance of the grading permit for each particular area on site. Mitigation will be implemented as impacts occur; therefore, mitigation has been divided into phases. Specific product phasing may increase or decrease based on economic factors. Mitigation has been divided into three major phases:

- **Phase 1:** Impacts/mitigation south of proposed Baltimore Oriole Road, including the off-site extension of Horse Ranch Creek Road, Pankey Place, and Pala Mesa Drive.
- **Phase 2**: Impacts/mitigation north of proposed Baltimore Oriole Road.

- **Phase 3**: Impacts/mitigation for off-site intersection improvements as each intersection is improved.

Because mitigation will be phased, an impact and mitigation tracking system will be utilized. The Project Applicant or monitoring biologist will tally impacts as they occur and ensure that the appropriate mitigation (preservation, creation, and/or enhancement) occur concurrently. The Applicant, County, or monitoring biologist will ensure that adequate and appropriate mitigation is provided for the total impact to each habitat.

Habitats

M-BI-1a Wastewater Management Option 1: Significant direct impacts to 9.2 acres of southern riparian forest (including 8.2 acres on site and 1.0 acres off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. A total of 9.2 acres of riparian forest shall be created off site. Off-site mitigation for this habitat type must be of sufficient quality to support least Bell's vireo, yellow warbler, and yellow-breasted chat. Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU. A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. In addition, 18.4 acres of the on-site southern riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping, removal of exotics, and potential removal of existing berms.

Wastewater Management Option 2: Significant direct impacts to 10.5 acres of southern riparian forest (including 9.5 acres on site and 1.0 acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. A total of 10.5 acres of riparian forest shall be created off site. Off-site mitigation for this habitat type must be of sufficient quality to support least Bell's vireo, yellow warbler, and yellow-breasted chat. Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU. A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. In addition, 21.0 acres of the on-site southern riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping, removal of exotics, and potential removal of existing berms.

M-BI-1b Significant direct impacts to 1.66 acres of southern willow scrub (including 1.6 acres on site and 0.06 acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. This mitigation shall consist of creating 1.66 acres of southern willow scrub habitat off site. Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU.[1] A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. An additional 3.32 acres of the Project site's riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping, removal of exotics, and potential removal of existing berms.

M-BI-1c Wastewater Management Option 1: Significant direct impacts to 6.6 acre of freshwater marsh (including 6.5 acres on site and 0.1 acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. This mitigation shall consist of creating 6.6 acres of freshwater marsh habitat off site. Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU. A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. In addition, 13.2 acres of the Project site's riparian forest shall be

[1] The manufactured slope will be revegetated for buffer purposes only and will not be counted toward mitigation.

enhanced. On-site enhancement shall include cowbird trapping, removal of exotics, and potential removal of existing berms.

Wastewater Management Option 2: Significant direct impacts to 7.9 acres of freshwater marsh (including 7.8 acres on site and 0.1 acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. This mitigation shall consist of creating 7.9 acres of freshwater marsh habitat off site. Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU. A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. In addition, 15.8 acres of the Project site's riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping, removal of exotics, and potential removal of existing berms.

M-BI-1d Significant impacts to 1.3 acres of coast live oak woodland shall be mitigated at a ratio of 2:1 or 3:1. One acre of this habitat shall be mitigated at 2:1 as it is in the fuel modification zone and 0.3 acre shall be mitigated at 3:1 as it would be impacted due to grading. Therefore, a total of 2.9 acres is required to mitigate this habitat type. This mitigation shall consist of preserving 1.5 acres on site and purchasing 1.43 acres of oak woodland in an off-site mitigation bank or on other land as approved by the Director of DPLU.

M-BI-1e Significant impacts to 46.25 acres of Diegan coastal sage scrub (including 42.3 acres on site and 3.95 acres off site) shall be mitigated at a 2:1 ratio for a total mitigation requirement of 92.50 acres. This impact shall be partially mitigated through the preservation of the remaining Diegan coastal sage scrub on site (87.3 acres). The remainder of the required mitigation shall be accomplished by purchasing 5.20 acres off site in a mitigation bank or other land as approved by the Director of DPLU.

M-BI-1f Significant impacts to 47.57 acres of non-native grassland habitat (including 41.2 acres on site and 6.37 acres off site) shall be mitigated at a ratio of 0.5:1 for a total mitigation requirement of 23.79 acres. Mitigation shall consist of preserving the remaining non-native grassland on site (2.9 acres) and purchasing 20.89 acres off site in a mitigation bank or other land as approved by the Director of DPLU.

M-BI-1g Significant impacts to 141.56 acres of pasture (including 133.8 acres on site and 7.76 acres off-site) shall be mitigated at a ratio of 0.5:1 for a total mitigation requirement of 70.78 acres. Mitigation shall consist of preserving the remaining pasture on site (1.6 acres) and purchasing 69.18 acres off site of mitigation credit at an approved mitigation bank or on land approved by the Director of DPLU that is equal to or "like functioning" to the impacted pasture.

Jurisdictional Areas

M-BI-2 Significant impacts to Corps and CDFG jurisdictional wetlands shall be mitigated through habitat-based mitigation, as described in M-BI-1a through 1c, above. Impacts to Waters of the U.S. shall be mitigated at a 1:1 ratio (1.6 acres) through enhancement of on-site southern riparian forest. The Project Applicant shall obtain applicable regulatory permits from other agencies.

Sensitive Plants

M-BI-3 Direct significant impacts to Parry's tetracoccus shall be mitigated through the preservation of the remaining population of this species on site.[2] Minor encroachment into the larger northern population (located within the outer limits of the fuel modification zone) shall be avoided during brushing and clearing. The limits of the population shall be flagged or fenced (with drift fence) to demarcate the limits of brush clearing. To mitigate for the loss of the 248 plants in the north central portion of the site, habitat supporting this plant species at a 2:1 ratio shall be purchased or created off site. This may co-occur with other mitigation/habitat needs of the Project. Off-site lands must be within an approved mitigation bank or lands deemed acceptable by the Director of DPLU.[3] If, for any reason, an appropriate preserve population cannot be located, the Director of DPLU will be contacted and an alternate mitigation will be determined. Alternative mitigation may include propagation of the plant from seed.

Sensitive Wildlife

M-BI-4 Significant direct impacts to the least Bell's vireo shall be mitigated through habitat-based mitigation addressed in M-BI-1a, above. Habitat mitigation shall consist of creation of southern riparian forest at a 1:1 ratio and enhancing portions of on-site southern riparian forest habitat. Creation and enhancement shall be conducted in accordance with habitat requirements of the least Bell's vireo.

M-BI-5 Long-term significant direct impacts to the coastal California gnatcatcher shall be mitigated through the habitat preservation and off-site habitat purchase per M-BI-1e, above.

M-BI-6 Significant direct impacts to the yellow warbler shall be mitigated through the habitat-based mitigation addressed in M-BI-1a, above. Habitat mitigation shall consist of creation of southern riparian forest at a ratio of 1:1 and enhancing portions of on-site southern riparian forest remaining. Creation and enhancement shall be conducted in accordance with habitat requirements of the yellow warbler.

M-BI-7 Significant direct impacts to the yellow-breasted chat shall be mitigated through the habitat-based mitigation addressed in M-BI-1a, above. Habitat mitigation shall consist of creation of southern riparian forest at a ratio of 1:1 and enhancing portions of on-site southern riparian forest remaining. Creation and enhancement shall be conducted in accordance with habitat requirements of the yellow-breasted chat.

M-BI-8 Significant direct impacts to raptor foraging areas shall be mitigated through the habitat-based mitigation addressed in M-BI-1f and M-BI-1g, above. Habitat mitigation shall consist of the preservation of non-native grassland and pasture at a 0.5:1 ratio.

Indirect Impacts

M-BI-9 No grading, clearing, or construction activity shall be initiated within 300 feet of occupied habitat during coastal California gnatcatcher and southern California rufous-crowned sparrow breeding season (February 15 through August 31), 300 feet of occupied habitat

[2] The Project site burned during the October 2007 wildfires. It is anticipated that the population will re-germinate to their original population size.

[3] Parry's tetracoccus, though sensitive, is still relatively abundant in the County. Therefore, locating this plant for preservation is feasible.

during least Bell's vireo, yellow warbler, and yellow breasted-chat breeding season (March 15 through September 15), 500 feet of occupied tree-nesting raptor habitat during raptor breeding season (January 15 through July 15), or within 800 feet of ground nesting raptor habitat during raptor breeding season (February 1 through July 15). All grading permits, grading plans, and improvement plans shall state the same. If grading, clearing, or construction would occur during gnatcatcher and/or raptor nesting seasons, a qualified biologist shall conduct a pre-construction survey to determine if these species occur within impacted areas. If there are no gnatcatchers or raptors nesting (including nest building or other breeding/nesting behavior) within this area, development shall be allowed to proceed.

If grading activities, including blasting and associated drilling, in the development area are scheduled to occur during sensitive bird breeding seasons, the Diegan coastal sage scrub in the northern section of the site the adjacent 500 feet of the open space easement areas shall be surveyed by a qualified biologist to determine if nests occupied by these species are present. Drilling is known to create noise at a level of 94 dBA at a distance of 50 feet. This corresponds to 60dBA at a distance of 2,500 feet. Where drilling is required, maximum feasible sound attenuation measures shall be incorporated. The typical level of noise reduction for a 10-foot high barrier is approximately 12 dB. This would reduce the distance of the 60-dBA contour, originally 2,500 feet from the unmitigated drilling activity to approximately 1,000 feet from the drilling activity.

Therefore, if nests are present and if drilling is necessary, maximum feasible sound attenuation shall be accomplished. This includes no grading or clearing within 500 feet during the breeding season. No drilling would be allowed if nests are located within 1,000 feet. If nests are located between 1,000 and 2,500 feet from the drilling site, a temporary sound barrier deemed appropriate by the monitoring biologist and acoustician, will be installed that completely blocks any part of the drilling site facing sensitive avian habitat. Outside of the nesting season or during the nesting season if pre-construction surveys are negative, no restriction shall be placed on grading, including blasting/drilling activities. A report shall be submitted to the Director of DPLU describing the survey results and dates of clearing or grading activities. This design measure may be modified as necessary with written approval of the Director of DPLU.

M-BI-10 through 12

- The Project shall implement the required RMP (REC 2009d; Appendix G of EIR Appendix G) for the Proposed Project, including the following measures:
    - The Project Applicant shall participate in a Landscape Maintenance District as the funding mechanism for the long-term management of open space.
    - Exotic plant species shall be removed from high quality woodlands, wetlands, and grasslands on an as-needed basis to be assessed every five years.
    - Sensitive plant population boundaries shall be mapped every three years.
    - Trash shall be removed from open space annually.
    - All habitats and sensitive plant and animal species shall be monitored annually. Biological surveys shall be conducted every five years for sensitive plant and animal species.
    - Fencing and signs within open space shall be maintained.

    The conceptual RMP (within Appendix G of EIR Appendix G) is a draft document that set guidelines. A final RMP shall be prepared prior to Project grading.

- The presence of the Limited Building Zones between development and the remaining habitat shall provide a buffer to minimize edge effects, such as encroachment and the future fuel modification of open space. The limited building zones reduce potential significant impacts associated with highly invasive non-native plant invasion, domestic animal predation, and human encroachment through signage of the open space and backyard fencing, as proposed on the fencing and signage plans. The limited building zones on the Project site would be within the fuel modification zone. Specifically, between MF-1 and OS-2, the limited building zone is included within the proposed enhanced wetland buffer and the fuel modification zone.

- The landscape plan shall include specifics regarding the types of plant species allowed along the Project footprint boundary. The final landscape plans will be reviewed prior to approval to ensure that no invasive non-native plants (as identified by the California Invasive Plant Council) are used adjacent to any biological open space areas.

- The limits of grading shall be flagged or marked with silt fencing prior to grading to prevent inadvertent impacts to adjacent sensitive habitat. Prior to brushing, a qualified biologist shall review the flagging and fencing.

- A qualified biologist shall monitor the limits of grading during clearing, grubbing, and grading. Monitoring shall be conducted once per day with weekly reports submitted to the County DPLU. If inadvertent impacts occur, they shall be reported to the appropriate agency within 24 hours.

M-BI-13 To prevent the potential for significant road kill impacts on Pankey Place, a barrier shall be erected on the north side of the road, adjacent to OS-2. The barrier shall be a six-foot high black or green vinyl-coated chain-link fence. It shall be erected at the edge of graded roadway between any trails/landscaping and the open space. The fence openings shall be small enough to deter climbing and encroachment by humans.

Potential Mitigation for Impacts Associated with Cumulative Traffic Mitigation in Conjunction with TIF Payment

As stated above, the Proposed Project may include the improvements of some additional off-site intersections as part of cumulative traffic mitigation in conjunction with payment of TIF. If this occurs, the mitigation measures below also would be implemented:

M-BI-1d(1) If the intersection of Old Highway 395/Stewart Canyon Road/Canonita Drive is improved by the Project, significant impacts to 0.01 acre of coast live oak woodland shall be mitigated at a ratio of 2:1 for a total mitigation requirement of 0.02 acre. This mitigation shall consist of purchasing 0.02 acre of oak woodland in an off-site mitigation bank or on other land as approved by the Director of DPLU.

M-BI-1e(1) If the intersections of Old Highway 395/Stewart Canyon Road/Canonita Drive, Old Highway 395/Pala Mesa Drive, and/or SR 76/Old Highway 395 are improved by the Project, significant impacts to up to 0.45 acre of Diegan coastal sage scrub shall be mitigated at a 2:1 ratio for a total mitigation requirement of up to 0.90 acre. Mitigation shall consist of purchasing up to 0.90 acre off site in a mitigation bank or other land as approved by the Director of DPLU.

M-BI-1f(1) If the intersection of Old Highway 395/Pala Mesa Drive is improved by the Project, significant direct impacts to up to 0.03 acre of non-native grassland habitat shall be mitigated at a ratio of 0.5:1 for a total mitigation requirement of up to 0.31 acre. Mitigation shall consist of purchasing up to 0.31 acre off site in a mitigation bank or other land as approved by the Director of DPLU.

M-BI-1g(1) If the intersection of Old Highway 395/Stewart Canyon Road/Canonita Drive is improved by the Project, significant impacts to 0.14 acre of pasture shall be mitigated at a ratio of 0.5:1 for a total mitigation requirement of 0.015 acre. Mitigation shall consist of purchasing 0.015 acre off site of mitigation credit at an approved mitigation bank or on land approved by the Director of DPLU that is equal to or "like functioning" to the impacted pasture.

Mitigation for Cultural Resources Impacts

M-CR-1a, 1b, and 1d

Direct impacts to buried, previously unrecorded cultural resources would be mitigated through the implementation of a grading monitoring program for both on-site development and off-site improvements. Prior to approval of grading or improvement plans, the Project Applicant shall implement a grading monitoring and data recovery program to mitigate potential impacts to undiscovered buried archaeological resources on the Project site to the satisfaction of the Director of DPLU. This grading monitoring program shall include, but not be limited to, the following actions:

1. Provide evidence to the DPLU that a County-approved archaeologist has been contracted to implement a grading monitoring and data recovery program to the satisfaction of the Director of DPLU. A letter from the Project Archaeologist shall be submitted to the Director of DPLU. The letter shall include the following guidelines:

    a. The consulting archaeologist shall contract with a Luiseño Native American monitor to be involved with the grading monitoring program.

    b. The County-approved archaeologist/historian and Luiseño Native American monitor shall attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the monitoring program as outlined in the County of San Diego Report Format and Content Guidelines – Cultural Resources: Archaeological and Historic Resources (December 5, 2007).

    c. The consulting archaeologist shall monitor all areas identified for development.

    d. An adequate number of monitors (archaeological/historical/Native American) shall be present to ensure that all earthmoving activities are observed and shall be on site during all grading activities.

    e. During the original cutting of previously undisturbed deposits, the archaeological monitor(s) and Luiseño Native American monitor(s) shall be on site full time. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and location of inspections will be determined by the Principal Investigator in consultation with the Native American monitor. Monitoring of cutting of previously disturbed deposits will be determined by the Principal Investigator.

    f. Isolates and clearly non-significant deposits shall be minimally documented in the field, and the monitored grading can proceed.

g. In the event that previously unidentified potentially significant cultural resources are discovered, the archaeological monitor(s) shall have the authority to divert or temporarily halt ground disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The Principal Investigator shall contact the County Archaeologist at the time of discovery. The Principal Investigator, in consultation with the County staff archaeologist and Luiseño Native American monitor, shall determine the significance of the discovered resources. The County Archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the County Archaeologist, then carried out using professional archaeological methods.

h. If any human bones are discovered, the Principal Investigator shall contact the County Coroner. In the event that the remains are determined to be of Native American origin, the MLD, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains.

i. Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The Principal Investigator shall determine the amount of material to be recovered for an adequate artifact sample for analysis.

j. In the event that previously unidentified cultural resources are discovered, all cultural material collected during the grading monitoring program shall be processed and curated at a San Diego facility that meets federal standards per 36 CFR Part 79, and therefore would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.

k. In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the satisfaction of the Director of DPLU prior to the issuance of any building permits. The report shall include the following:

   i. Department of Parks and Recreation Primary and Archaeological Site forms;

   ii. Evidence from a federally approved curation facility within San Diego County that all cultural material collected during the grading monitoring program has been received for curation accompanied by payment of the fees necessary for permanent curation.

l. In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the Director of DPLU by the consulting archaeologist that the grading monitoring activities have been completed.

M-CR-1c To avoid direct impacts to site CA-SDI-682/Monserate adobe from off-site improvements, a temporary fencing plan shall be implemented. Prior to the start of grading or improvements, the Project applicant shall implement a temporary fencing plan to mitigate potential impacts to site CA-SDI-682/Monserate adobe to the satisfaction of the Director of DPW. The temporary fencing plan shall include, but not be limited to the following actions:

1. Prepare and implement a temporary fencing plan for the protection of archaeological site CA-SDI-682/Monserate adobe, the temporary fencing plan shall be implemented under the supervision of a County-approved archaeologist that consists of the following:

   a. Prepare and implement a temporary fencing plan for the protection of archaeological site CA-SDI-682/Monserate adobe during any grading activities within 100 feet of said archaeological site(s). The temporary fencing plan shall be prepared in consultation with a County-approved archaeologist. The fenced area shall include a buffer sufficient to protect the archaeological site(s). The fence shall be installed under the supervision of the County-approved archaeologist prior to commencement of grading or brushing and be removed only after grading operations have been completed. The temporary fencing plan shall include the following requirements:

      Provide evidence to the Director of DPW that the following notes have been placed on the Grading Plan:

      In the event that construction activities are to take place within 100 feet of archaeological site CA-SDI-682/Monserate adobe, the temporary fencing plan shall be implemented under the supervision of a County-approved archaeologist that consists of the following:

      i. The Project archaeologist shall mark known limits of site loci.

      ii. The Project archaeologist shall determine the appropriate portion of Horse Ranch Creek Road for which the limits of proposed road grading will be fenced to ensure that the grading avoids buried deposits.

      iii. Upon approval of the proposed extent of fencing by the County archaeologist, the Project archaeologist shall supervise the fencing installation.

      iv. Submit to the DPW for approval a signed and stamped statement from a California Registered Engineer, or licensed surveyor that temporary fences have been installed in all locations of the Project site where proposed grading or clearing is within 100 feet of the archaeological site CA-SDI-682/Monserate adobe.

      v. Fencing will be removed after the conclusion of construction activities.

Environmental Design Considerations/Conditions of Approval

Design Considerations for Aesthetics and Landform Alteration

- Residential and commercial designs, while varied in design theme, will be generally uniform in massing, elevation, and density. Proposed project zoning specifies the following maximum height limits: 35 feet for single-family; 35 feet for multi-family; 40 feet for the Town Center; and 35 feet for office professional buildings uses.
- The entire development (residential, Town Center, parks, and office) will use common siting principles, landscaping, and construction materials as well as pedestrian orientation.
- Development will be consolidated on flatter, less environmentally sensitive areas to minimize impacts to sensitive upland habitats.
- Grading (cut and fill) will be balanced on site.
- Edges of development will be softened through the use of contour grading.

- Varied heights of trees, shrubs, and groundcover will be planted on modified slopes to result in "visual undulation."
- Landscaping will be installed within each constructed phase as it is finished.
- Project lighting will adhere to Division 9 of the County LPC.
- All landscaping will follow Project landscaping design guidelines as described in the SPA/GPA Report as well as applicable government regulations and standards, including those for sight line visibility and access.
- All landscaping and irrigation plans will be consistent with appropriate guidelines and regulations and prepared by a licensed landscape architect and submitted to the County for review and approval prior to construction.
- All non-preserved areas not covered by structures or hardscape/paving will be appropriately and professionally landscaped.
- Landscape design will define areas through the creation of a focal point at entries, screening of unsightly areas, softening of expanses of pavement and buildings, and provision of transitions and separations between Project development and the surrounding community.
- Larger specimen trees will be installed at entries and key locations throughout the development.
- Areas around buildings will incorporate a mixture of trees, shrubs, vines, and groundcover designed to complement the overall design theme of the Project.
- Where the Project "Planned Sign Program" is silent, the County of San Diego Zoning Ordinance (Section 6200, Off-Premise Sign Regulations and Section 6250, On-Premise Sign Regulations) will control.
- Where feasible, noise barriers may incorporate a berm or non-glare glass/"lexon" panel combination. See-through panels also may be used where second-story balconies require noise attenuation. The wall height will not exceed 10 feet.
- Where sound walls are built that would be visible from Horse Ranch Creek Road, Pala Mesa Drive or SR 76, the wall will be screened by Project-planted vegetation. These walls will be subject to long-term maintenance through the HOA.
- Within the Town Center, both stone/stone product and native and/or locally occurring plant materials will be widely used in Village entries and other features as one of its unique, identifying design theme elements. The following items are required:
    - A minimum of 20 percent of the total vertical exterior building surface area will be concrete, natural or cut stone, or stone veneer. Quarried and eroded granite, sandstone, flagstone, or metamorphic stone may be used to satisfy the requirements of these guidelines. Lava rock or artificial stone products will be evaluated on a case-by-case basis.
    - The requirement in the above item may be waived provided that an equal square footage of landscape walls, terraces, or other features is provided within the landscaping. Any such elements will be designed as extension of the building walls to "tie" the structure into the landscape, repeat architectural forms, and help ensure reinforcement of this unique identifying theme.
    - Poured-in-place concrete also is an acceptable exterior surface material. Concrete panels may be sandblasted exposed aggregate, battered, or board- or earth-formed.
- Within the office professional use, non-reflective/non-glare glass will be widely used. Large expanses of glass will be restricted to the two office professional use areas.

- Single-family detached residential lots and setbacks will encourage variety in the design, orientation, and placement of homes.
- Minimum front yard building setbacks to houses are 15 feet. Minimum front yard building setbacks to garages facing the street are 20 feet. Setbacks will be varied, where possible, to avoid a monotonous pattern.
- Where slopes in the side yards allow for varied side yard setbacks, more useful private open space in side yards will be provided to avoid a monotonous pattern of houses.
- Multiple housing plans will be provided for compatibility with different lot configurations (interior and corner lots) and variety of designs for entry and garage designs.
- Side-entry floor plans may be used on both interior and corner lots, provided that the entry is clearly defined and the front elevation includes front-facing windows, porches, or other pedestrian-oriented design features.
- Housing plans used on corner lots will provide for architectural features, such as porches or entry trellises, to wrap around the street-facing corner.
- Production wall fencing will be integrated into the design of corner lots to provide for reduced wall length and other enhancements to side yards.
- Where the rear of a lot abuts a street, the design will provide for a privacy wall and landscaping consistent with the Campus Park streetscape theme.
- Grade differentials within neighborhoods will be used to add variety and enhance the sense of open space between residences.
- Basic guidelines for single-family residential garage design include requirements to:
    - Minimize the impact of garages facing the street by techniques such as varying garage door patterns and using deep recessed doors, varying colors, splitting one large door into two single doors, and integrating door window and coach lights.
- For multi-family housing, developments fronting onto Village Pathway and Promenade streets will be oriented toward the street with reduced setbacks, multiple entries, and pedestrian connections to ground floor units.
- Multi-family buildings will be oriented to create outdoor rooms, such as courtyards, connected by landscaped walkways.
- Multi-family landscaping will be comprised of trees, shrubs, vines, and ground covers that are consistent with the overall Campus Park theme.
- Tree plantings in the front yard areas of multi-family housing will be varied to provide interest in the landscape.
- Multi-family side and rear yard areas will be landscaped to soften the architecture and provide privacy for residential units.
- All business identification signs will comply in terms of size, number of colors and materials with standards specified in the Fallbrook Community Plan Design Guidelines. One sign will be allowed per business on each building wall.
- The materials and colors of the sign also will be compatible with the style, materials, and colors of the Project architecture.
- Address number signs will be of an appropriate size and location to be clearly visible to visitors and emergency responders.

- Prohibited signs include roof-mounted signs, flashing lights or signs, and animated signs or lights that convey the illusion of motion.
- Screen planting shall be utilized to visually buffer office professional uses from the I-15 Corridor.
- PAs will be unique, but share fundamental architectural characteristics consistent with the Village theme.
- Building elevations visible from public view areas (all Village streets, surrounding arterial streets, and public open spaces) will be articulated with elements such as wall offsets, balconies, and windows, appropriate to the architectural style.
- The architectural style along the same street or within an individual PA will be compatible as a result of use of similar building heights, materials, window or door style, detailing, porches, arcades, overhangs, roofing, or color.
- Varied building elements, roof pitches, and setbacks will be employed to avoid monotony.
- Distinctive building elements will be oriented toward the corners of prominent Village core and entry street intersections.
- Street-facing facades will incorporate a range of scale-defining elements that relate building masses to the scale of the pedestrian. Elements may include trellises, columns, archways, doorways, porches or patios, and upper floor balconies and windows.
- Individual residential unit entries will be oriented toward the Village streets wherever possible.
- Internal homes will be connected to the Village streets by courtyards or landscaped walkways wherever possible.
- Utilitarian areas, including parking, loading, mechanical equipment, and trash enclosures, will be screened from public views to the extent possible.
- All public/HOA planting areas will be permanently irrigated and use low water consumptive plant material wherever practical.
- Transformer and cable box locations will be carefully planned and coordinated with both the utility company and the landscape architect. Transformers and cable boxes will be located to be unobtrusive and screened from view with plantings where possible.
- Mailboxes and mailbox structures will be designed to complement the architectural style of the development for which they are intended. Grouped mailboxes will be used with a maximum of 12 boxes per cluster.
- Trash enclosures will be designed to complement the architectural style of the development for which they are intended. Recycling areas (at least 50 percent) will be compatible with the proposed trash enclosure. Trash and recycling areas, or bins or container placed therein, will be protected from adverse environmental conditions, such as rain, that might render the collected materials unmarketable. Provisions for trash and recycling will be in conformance with the County requirements.
- Large expanses of asphalt paving will be avoided, where possible, and the appearance softened by landscape screening. Exposed vehicular use areas (all parking lots greater than 6,000 square feet) will include a minimum of 10 percent of the paved areas in landscaping, dispersed throughout the parking area such that every designated parking space will be within 30 feet of the trunk of a tree.
- Illumination of walkway/trail connections will be provided through the use of low intensity fixtures for safety and comfort. The lighting pattern and intensity will become more intense at path intersections and vehicular crossings

- Within building groups, architectural and accent lighting will be indirect and subtle. Increased lighting levels will highlight pedestrian areas to clearly define the pedestrian path. Service area lighting will be contained within the service area boundaries/enclosure. Lighting will be designed to minimize glare and intrusion into neighboring land uses.

Design Considerations for Transportation/Traffic

- In order to preclude substantial traffic delays during construction of residential, Town Center, recreational, and public services/utility Project elements, the Proposed Project includes the preparation and approval of a Traffic Control Plan, including measures to reduce traffic delays and minimize public safety impacts, such as the use of flagmen, traffic cones, detours and advanced notification signage, pedestrian/equestrian detours, movement restrictions, and temporary lane closures. In addition, the construction contractor will provide a means for public liaison/contact information for public inquiries and concerns.
- Grading will be balanced on site, with no import or export. Any rock generated due to on-site blasting during construction will be used on site.
- Traffic signs denoting equestrian crossings will be located along applicable roadways to promote safety. Equestrian paths will be provided along Horse Ranch Creek Road south of Baltimore Oriole Road, Pala Mesa Drive, Baltimore Oriole Road, and Harvest Glen Road.
- Equestrian push buttons for crossing will be provided at signalized intersections.
- Regional trails crossing roads will be designed to cross at or near a right angle.

Design Considerations for Air Quality

- The Project is pedestrian and bicycle friendly to encourage reduction in vehicle usage and trips. The mixed-use Town Center would be within a 10-minute walk (1/2 mile) of the majority of proposed residences. Transit stops will be located along Horse Ranch Creek Road and Pala Mesa Drive. The bus route also would include a loop along Baltimore Oriole Road and Longspur Road. NCTD turnouts would be provided in the vicinity of each intersection along Horse Ranch Creek Road and off site on the north side of SR 76 between Horse Ranch Creek Road and the Project site, as well as SR 76 between future Pala Mesa Drive and I-15.
- The Project includes commercial (i.e., Town Center) and recreational uses to encourage use of local facilities and reduce trip lengths.
- One long-term bicycle parking space will be provided for each unit at multi-family uses without garages.
- Class I or II bike lanes are located within ½ mile of all Project uses and the Project bike-lanes connect to an existing off-site facility.
- Non-residential site uses provide 1 bike rack space per 20 vehicle parking spaces.
- Site design and building placement will minimize barriers to pedestrian access and interconnectivity.
- Transit improvements will include shelters, route information, benches and lighting.
- Project design includes pedestrian/bicycle safety and traffic calming measures in excess of County requirements.
- Project internal roads will converge in right angle formations (rather than skewed, or acute, angles).
- Project intersections will use pedestrian safety/traffic calming measures such as marked crosswalks, countdown signal timers, curb extensions, speed tables, raised cross walks, raised intersections,

median islands, tight corner radii and roundabouts or mini-circles.

- Project streets will favor pedestrian safety/traffic calming measures such as on-street parking, planter strips with street trees, and chokers.
- The Project will provide preferential parking spaces for electric and/or compressed natural gas vehicles.
- Residential buildings will provide a space for recharge of batteries for both small (hand held) as well as large (e.g., an electric lawnmower or car) equipment (laundry rooms and garages).
- The Proposed Project will have retail, open space, office, park and residential uses within ¼ of each other.
- Project will use only electric or natural gas stoves in residences.
- Grading will entail multiple applications of water during grading between dozer/scraper passes.
- Paving, chip sealing, or chemical stabilization of internal roadways will occur after completion of grading.
- Sweepers or water trucks will remove "track-out" at any point of public street access.
- Dirt storage piles will be stabilized by chemical binders, tarps, fencing, or other erosion control and suppression measures.
- Grading will terminate if winds exceed 25 mph.
- Residential slopes will be hydroseeded if lots are not developed soon after grading.
- Construction vehicles will use low-sulfur diesel fuels.
- The Project will provide residents with separate recycling and waste receptacles to support the 50 percent state-wide solid waste diversion goal.
- The Project will require separation and recycling of construction waste.
- The Project landscaping palette will include drought-tolerant trees, emphasizing evergreens on the north and west sides of buildings and deciduous trees on the south sides of buildings. These plantings will contribute to on-site carbon storage, provide shade, and reduce heating from impervious surfaces.
- The Project will provide electrical outlets at building exterior areas.
- The Project will provide shade within five years or use light-colored materials or open grid pavement for at least 30 percent of the site's non-roofed impervious surfaces.
- The Project's compact land-use patterns will reduce habitat fragmentation and contribute to the preservation of natural habitats, including forests and woodlands.
- The Project will use reclaimed water, if available, to the extent possible.
- The Project will strive for a 50 percent reduction in residential water use through features such as low-flow appliances (including toilets, shower heads, washing machines), as well as a drought-tolerant landscape palette, weather-based irrigation controllers, and other water conservation measures.
- Buildings at the Project will achieve energy performance equivalent to at least 20 percent better than current Title 24 standards.
- The Project will install energy reducing programmable thermostats that automatically adjust temperature settings.

- The Project will install low-energy traffic signals and energy efficient (sodium) street lighting.
- The Project will install energy reducing passive heating and cooling systems (e.g., insulation and ventilation).
- The Project will install energy reducing daylighting systems (e.g., skylights, light shelves and interior transom windows).
- The Project will increase interior wall and roof insulation.
- Project buildings will be designed using double-paned windows, door sweeps and weather stripping, electric light dimming controls where feasible, and high-efficiency heating and cooling systems.
- Residents at the Project will be offered a choice of energy efficient appliances (including washer/dryers, refrigerators) and appliances installed by builders would be Energy Star (including dishwashers).
- Smart growth land use patterns will be implemented, which reduce the amount of land being developed with commensurate reductions in greenhouse gas emissions.
- The Project will provide educational materials for residents discussing strategies for reducing GHG emissions associated with the operation of their buildings.
- The Project will be conditioned to participate in contributing appropriate funds for the acquisition, design and construction of a Transit Node.

Design Considerations for Noise

- Blasting procedures will comply with Division 5 of Title 3 of the San Diego County Code of Regulatory Ordinances Relating to Blasting Operations, as amended (Ordinance 7821, September 1990).
- No more than two drills will operate simultaneously, and no more than two blasts per day will occur in any one area. No rock crushing will occur on site.
- The blasting contractor will conduct a pre-blast survey to determine if any sensitive uses need to be monitored during blasting operations.
- A minimum five-foot-high community theme wall will be erected along the property line to separate the PA MF-4 site from adjacent off-site development unless it is determined on an approved site plan that such a wall is not necessary or another design is more appropriate.
- Noise barriers may consist of a wall and berm combination. The wall height in a combination barrier will not exceed 10 feet.

Design Considerations for Geology

- Prior to and/or during site development, the Project geotechnical engineer will review Project plans to ensure compatibility with geotechnical conclusions and review (and modify as appropriate) applicable field activities (e.g., grading, removal of unsuitable surficial soils, and manufactured slope construction) to ensure conformance with appropriate geotechnical recommendations, regulatory guidelines, and industry standards.
- Project design will incorporate the peak ground acceleration level identified in the Project Geotechnical Investigations (Appendix F), as well as applicable International Building Code (IBC) and County Building Code standards related to subsurface profile type, acceleration and velocity coefficients, seismic zone, and seismic source.

- Project construction will incorporate appropriate best management practices (BMPs) to control erosion and sedimentation, pursuant to applicable NPDES and County requirements and standards. Specific BMPs will be identified in the Project Storm Water Pollution Prevention Plan (SWPPP; to be prepared prior to Project construction) and may include measures such as seasonal and area grading restrictions, use of a weather-triggered action plan during the rainy season, use of erosion prevention and control efforts (e.g., fiber rolls, soil binders and silt fences), storage of BMP materials on site to provide adequate standby capacity, provision of appropriate training for construction personnel, installation of permanent landscaping after construction, implementation of appropriate solid waste management and dust control efforts, and implementation of sampling and monitoring programs per regulatory requirements. Refer to Section 3.2.3 of Subchapter 3.2, Geology/Paleontology, for more discussion.

- Project construction will incorporate measures to address expansive soils in applicable areas, including techniques such as removal and replacement of expansive materials with engineered fill, selective grading (e.g., placing a cap of non-expansive material), or other appropriate industry standard measures from sources such as the IBC.

- Project construction will incorporate measures to address potential impacts related to the generation and disposal of oversize materials, including standard industry techniques such as restricting the size and/or location (e.g., depth) of materials used in various types of fills, or use in landscaping efforts, pursuant to direction in the Project Geotechnical Investigations (Appendix F).

- Project design and construction will incorporate measures to address potential issues related to cut and fill/steep fill transitions and bedrock cuts, including the use of overexcavation and appropriate fill depths, pursuant to recommendations in the Project Geotechnical Investigations (Appendix F).

- Project design and construction will incorporate measures to address potential issues related to the stability of manufactured slopes, including:
    - Use of drained replacement (stabilization) fills for cut slopes exposing fractured or faulted bedrock, alluvium, or colluvium.
    - Replacement with drained compacted fill, or construction at lower (layback) angles, for cut slopes that are steeper and oriented in the same direction as exposed geologic contacts and fracture patterns.
    - Construction of fill slopes at maximum ratios of 2:1 (horizontal to vertical).
    - Installation of terrace drains at approximately 30-vertical-foot intervals on fill slopes.
    - Use of increased compaction standards (i.e., 93 to 95 percent) for fills (exceeding 50 feet) in depth.
    - Use of subsurface drainage for fill slopes.
    - Avoidance of side hill fill slopes wherever feasible.

- Project design and construction will incorporate measures to address potential issues related to the design and integrity of residential foundations, including locating residential structures outside of areas of mapped alluvial deposits, and conformance with geotechnical recommendations related to footing locations/depths, proximity to slope faces, and slab-on-grade design criteria (e.g., thickness and use of expansion joints).

Design Considerations for Biological Resources

- A hydroseed mix that incorporates native species, is appropriate to the area, and is without invasive species, will be used for slope stabilization in all transitional zones.
- "California" pepper trees (*Schinus molle)* will not be permitted within the Project plant palette.
- Native vegetation will be preserved whenever feasible, and all disturbed areas will be reclaimed as soon as possible after completion of grading.
- Project trails will be aligned on existing paths, roads, and utility easements, and within otherwise disturbed areas to the extent feasible in order to minimize impacts to sensitive resources.
- Native oaks will be preserved in open spaces to the maximum extent possible.
- Trails will avoid fragile root areas of trees and shrubs, where feasible. Where trails cross natural terrain, width may be reduced to four feet for a short distance to protect sensitive resources.
- Lodgepole fencing will be at select locations to prevent encroachment into the open space, as discussed in the RMP.

Design Considerations for Public Services and Utilities

- The Project Applicant will pay developer fees levied by each applicable school district prior to the issuance of building permits.
- The Project design will include water conservation measures, including the state-mandated 14 BMPs for water conservation (such as installation of ultra low-flow toilets) and the use of drought tolerant/native vegetation where possible (e.g., not prohibited by fire management requirements).
- The Project will be conditioned to require the Project Applicant to contribute appropriate funds, along with the other projects located in and around the I-15/SR 76 Interchange, to fund a Sheriff's station, which may be located at the Campus Park West Project site.
- Project design will incorporate appropriate fuel management zones (100 to 200 feet wide) in designated areas (e.g., adjacent to all structures), pursuant to the San Diego County Fire Code and as detailed in the Conceptual Fire Protection Plan/Fuel Modification Plan. (Appendix J.)
- Project design will meet all general vegetation management requirements of the Conceptual FPP/FMP (Appendix J).
- Fuel management zones will be appropriately maintained by the Project HOA, which will include efforts such as inspecting/repairing irrigation systems, vegetation thinning/pruning, and weed removal.
- Project landscape design will exclude all prohibited plant materials listed in the Prohibited Plant Materials list in the Conceptual Fire Protection Plan/Fuel Modification Plan (Appendix J). The prohibited trees, shrubs, vines, and groundcovers shall not be planted or retained in any community vegetation management zone, landscaped area, as street trees, or in any median or planter.
- Project landscape shall be consistent with the planting, spacing, and maintenance guidelines in the Conceptual Fire Protection Plan/Fuel Modification Plan (Appendix J).
- Project design will incorporate applicable ignition and fire resistance measures for all structures (pursuant to the San Diego County Fire and Building codes, see Appendix J), including the use of approved sprinkler systems; proper roofing and exterior wall materials; and appropriate design and construction of facilities such as eaves, vents, doors, window frames, decks, chimneys, gutters, and fences.

- Multi-family and office professional buildings exceeding 30 feet in height will have an approved stairway access to roofs for fire fighters.
- All structures exceeding 200 square feet will be equipped with sprinkler systems. For office and commercial uses, these sprinkler systems will have capacity for remote supervision.
- The design and operation of all access-related facilities such as streets, driveways, alleys, gates, speed bumps, walkways, and emergency access roads will comply with applicable requirements of the San Diego County Fire Code or other pertinent standards.
- Fire-related water supplies and access facilities within the site will conform to associated requirements identified in the Conceptual Fire Protection Plan/Fuel Modification Plan, including measures such as providing emergency truck access, providing adequate fire flow within the site (2,500 gpm for two hours), and using approved fire hydrant design and spacing (per requirements in the San Diego County Fire Code).
- All residential units will be equipped with smoke detectors.
- All Project locations/facilities with uses exhibiting potential fire safety issues, such as hazardous or flammable/combustible material storage sites, and battery storage/charging areas, will comply with appropriate sections of the California Fire Code.

Design Considerations for Hydrology and Water Quality

- Proposed Project design includes a number of site design, source control, and treatment control BMPs related to long-term water quality issues and associated regulatory requirements (including NPDES permitting and County requirements). The site owners (i.e., through an HOA) will be responsible for post-construction BMP programs and activities, as well as for monitoring and maintenance for physical BMP facilities. Refer to Subchapter 4.1.2, Chapter 8.0 and Appendix L for a detailed discussion of proposed site design source control and treatment control BMPs, as well as associated regulatory requirements.
    - Site design BMPs include measures such as preservation of open space and existing drainage patterns, use of landscaping with native/drought-tolerant varieties, use of permeable pavers as design accents, installation of flood control structures such as retention basins, minimization of irrigation/chemical applications in landscaped areas, discharge of runoff from developed areas into landscaping, control of runoff on slopes (e.g., with brow ditches), and use of energy dissipating structures at drainage outlet points.
    - Source control BMPs include installing inlet stenciling/tiles and signs in appropriate locations to discourage illicit discharge, implementing regular programs for landscape/drainage facility maintenance and waste/green waste disposal/recycling, providing proper containment and maintenance for trash/material storage areas, minimizing/controlling irrigation runoff, directing runoff from applicable areas (e.g., private roads) into landscaping or treatment control BMPs, and providing educational materials to homeowners.
    - Treatment control BMPs consist of installing enhanced bio-filtration swales and water quality basins within the Project site boundaries to treat post-construction runoff prior to off-site discharge.
- Surface runoff and resultant erosion will be minimized through use of low water consumptive/drought tolerant plants on landscaped slopes.
- All proposed storm drain facilities (including those associated with potential off-site structures) will be designed to accommodate a 100-year storm event.

- An authorized SWPPP/Storm Water Sampling and Analysis Strategy (SWSAS) will be implemented, pursuant to requirements under the NPDES and the County Watershed Protection, Stormwater Management and Discharge Control Ordinance/Stormwater Standards Manual. Specific elements in these plans include:
    - Construction debris storage areas will be restricted to appropriate locations at least 50 feet from storm drain inlets and watercourses.
    - Appropriate storage facilities for construction debris, including adequately sized watertight dumpsters; covers to preclude rain from contacting waste materials; impervious liners; and surface containment features such as berms, dikes, or ditches will be used to prevent runon and runoff.
    - A licensed waste disposal operator will be employed to regularly (at least once a week) remove and dispose of construction debris in an authorized off-site location.
    - Appropriate (i.e., non-hazardous) construction debris will be recycled for on- or off-site use whenever feasible.
    - Dust-control measures such as watering will be used to reduce particulate generation for pertinent locations and activities (e.g., concrete removal).
    - Erosion prevention and sediment control measures will be used within and/or downstream of all demolition activities.
    - Conformance with applicable requirements under the NPDES General Groundwater Extraction Waste Discharge Permit, if required (i.e., if discharge of extracted groundwater exceeds permit criteria).
    - Demolition BMPs such as:
        - Recycle appropriate (i.e., non-hazardous) construction debris for on- or off-site use whenever feasible.
        - Use dust-control measures, such as watering, to reduce particulate generation for pertinent locations/activities (e.g., concrete removal).
        - Use appropriate erosion prevention and sediment control measures downstream of all demolition activities.
        - Conform with applicable requirements related to the removal, handling, transport, and disposal of hazardous materials generated during demolition, including efforts such as implementing appropriate sampling and monitoring procedures; proper containment of contaminated materials during construction; providing protective gear for workers handling contaminated materials; ensuring acceptable exposure levels; and ensuring safe and appropriate handling, transport, and disposal of hazardous materials generated during Project construction.
- Project design and construction will incorporate measures to address issues related to Project site drainage and the potential for encountering shallow groundwater. Specifically, such measures include using positive drainage techniques to direct surface flows away from structures, controlling runoff on slopes (e.g., with brow ditches or terrace drains), minimizing/controlling landscape irrigation, use of subdrains in applicable areas to direct subsurface flows into drainage facilities, and conformance with NPDES permit requirements for groundwater removal/disposal.
- The Project will include raising the northernmost existing bridge over Horse Ranch Creek along the southern extension of the Pankey Road to provide adequate freeboard and avoid existing flooding during a 100-year storm.
- The Project Applicant will obtain letter from the adjacent Campus Park West property owner stating that post-Project flooding onto their property is allowed.

Design Considerations for Hazards

- Paving operations will be restricted during wet weather and sediment control devices will be used downstream of paving activities.
- Paving wastes and slurry (e.g., use of properly designed and contained concrete washout areas) will be properly contained and disposed of.
- The amount of hazardous materials used and stored on-site will be minimized, and storage/use locations will be restricted to areas at least 50 feet from storm drains and surface waters.
- Raised (e.g., on pallets), covered, and/or enclosed storage facilities will be used for all hazardous materials.
- Mobile fueling/maintenance units for construction equipment will be used whenever feasible to avoid/reduce on-site fuel/lubricant storage.
- Accurate and up-to-date written inventories and labels will be maintained for all stored hazardous materials.
- Berms, ditches and/or impervious liners (or other applicable methods) will be used in material storage and vehicle/equipment maintenance and fueling areas to provide a containment volume of 1.5 times the volume of stored/used materials and prevent discharge in the event of a spill.
- Warning signs will be placed in areas of hazardous material use or storage and along drainages and storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal.
- All construction equipment and vehicles will be properly maintained.
- Solid waste management efforts such as proper containment and disposal of construction debris (e.g., use of watertight dumpsters and daily trash collection/removal) and street sweeping/vacuuming will be implemented.
- Training will be provided to applicable employees in the proper use, handling, and disposal of hazardous materials, as well as appropriate action to take in the event of a spill.
- Absorbent and clean-up materials will be stored in appropriate on-site locations where they are readily accessible.
- Wastewater facilities will be properly located and maintained.
- Recycled or less hazardous materials will be used wherever feasible.
- Regulatory agency telephone numbers and a summary guide of clean-up procedures will be placed in a conspicuous location at or near the job site trailer.
- Hazardous material use/storage facilities and operations will be regularly (at least weekly) monitored and maintained to ensure proper working order.
- A Storm Water Sampling and Analysis strategy will be implemented pursuant to regulatory guidelines.
- Where planned fills are 10 feet or greater in depth, methane probes will be required to assess methane concentrations in site soils. If methane gas is detected at concentrations greater than 12,500 parts per million (ppm), a methane remediation system designed by an engineer experienced in methane remediation will be approved prior to issuance of building permits.

- During Project construction and demolition of existing structures on the site, asbestos and lead paint surveys will be conducted and, if present, a licensed contractor will remove and properly dispose of these materials. If fluorescent lights are present, the ballast and light tubes will be disposed of in accordance with current regulations.
- Existing septic systems within the Project Parcel will be removed during the construction phase, pursuant to permits and requirements issued by the County DEH.
- Project construction activities conform applicable requirements of the NPDES General Groundwater Extraction Waste Discharge Permit, if appropriate (i.e., if discharge of extracted groundwater exceeds permit criteria).
- Construction debris storage areas will be restricted to appropriate locations at least 50 feet from storm drain inlets and watercourses.
- Appropriate storage facilities for construction debris will be used, including adequately sized watertight dumpsters covers to preclude rain from contacting waste materials impervious liners and surface containment features such as berms, dikes, or ditches to prevent runon and runoff.
- A licensed waste disposal operator will be employed to regularly (at least once a week) remove and dispose of construction debris in an authorized off-site location.
- Appropriate (i.e., non-hazardous) construction debris will be recycled for on- or off-site use whenever feasible.
- Dust-control measures such as watering will be used to reduce particulate generation for pertinent locations and activities (e.g., concrete removal).
- Erosion prevention and sediment control measures will be used downstream of all demolition activities.

Design Considerations for Land Use and Planning

- The lighting for the Proposed Project will comply with the County LPC.
- Where the Project "Planned Sign Program" is silent, the County of San Diego Zoning Ordinance (Section 6200, Off-Premise Sign Regulations and Section 6250, On-Premise Sign Regulations) will control.
- Trails that are part of the County Regional Trail System (Community Multi-purpose Trail and Regional Trails Links) will be developed in accordance with the County's Trail Standards and will accommodate equestrians, bicyclists, and pedestrians. The Regional Trail System will be dedicated to the County of San Diego, or another public agency or public interest organization.
- The Campus Park Community feeder trail system will be designed to accommodate bicyclists and pedestrians. Equestrian use on multi-purpose trails (Horse Ranch Creek Road and Baltimore Oriole Road) also will be allowed. Where trails pass through dedicated open space, the Community feeder trail system will be dedicated to the County or another public agency or public interest organization.
- Trails will be constructed per the County of San Diego Design and Construction Guidelines. The minimum regional trail easement will be 20 feet wide. A minimum travel width of at least eight feet is required for trails. Where trails cross natural terrain, the width may be reduced to four feet wide for a short distance in areas of topographically restricted width or to protect biological habitat. Community feeder trails will have a minimum travel width of at least four feet and will be surfaced with decomposed granite.

THIS PAGE INTENTIONALLY LEFT BLANK