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MEMORANDUM

To: Danny Nguyen, IMG Construction Management

From: Zhe Chen, Michael Baker International
Tina Yuan, Michael Baker International

Date: August 29, 2022

Subject: Mission Village Shopping Center Project– Air Quality Technical Memorandum

PURPOSE

The purpose of this technical memorandum is to evaluate potential short- and long-term term air quality impacts as a result of the proposed Mission Village Shopping Center Project (project), located in the City of Jurupa Valley (City), California.

PROJECT LOCATION

The City is located in the County of Riverside (County) and east side of Interstate 15 (I-15). State Route 60 (SR-60) traverses the City in a west-east orientation.

The project site encompasses approximately 8.3 acres (APNs 182-031-001, 182-031-002, and 182-022-002) generally bounded by Mission Boulevard to the north and Stobbs Way to the west. Access to the site occurs from Mission Boulevard, Stobbs Way, and the adjacent property to the east.

EXISTING SITE CONDITIONS

The project site is currently developed with retail buildings and associated surface parking lot. The project site is designated Commercial Retail (CR)[1] in the City of Jurupa Valley General Plan (General Plan) and zoned C-1/C-P (General Commercial)[2] in the City's Municipal Code.

PROJECT DESCRIPTION

The project would involve demolition of existing buildings and surface parking lot on-site and construction of a shopping center with a surface parking lot. The proposed shopping center would be approximately 78,325 square feet in total, consisting of two retail spaces totaling 34,600 square feet, a 18,000-square-foot grocery store, a 18,000-square-foot fitness center, a 2,900-square-foot fast food restaurant with

[1] City of Jurupa Valley, *Land Use Element*, 2017, https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF, accessed August 25, 2022.

[2] City of Jurupa Valley, *Zoning Map*, January 2019, https://www.jurupavalley.org/DocumentCenter/View/526/Zoning-Map-PDF, accessed August 25, 2022.

5 Hutton Centre Drive, Suite 500, Santa Ana, CA 92707
Office: 949.472.3505 | Fax: 949.472.8373

drive-through, a 3,825-square-foot carwash facility, a 1,000-square-foot restaurant, and 408 parking spaces. The project would provide 277 regular parking spaces, 55 compact parking spaces, 17 accessible parking spaces, 24 electric vehicle parking spaces, 33 clean air vehicle parking spaces, one family parking space, and one veteran's parking space in a surface parking lot on-site.

Project construction would occur over approximately 10 months, beginning in November 2022. Construction of the project would include the following phases: demolition, grading, building construction, paving, and architectural coatings. It is anticipated that the project would be completed and operational in 2023.

ENVIRONMENTAL SETTING

Regional Topography

The City is located within the South Coast Air Basin (Basin), a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area of Riverside County.

The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of air pollutants throughout the Basin.

Climate

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The climate consists of a semi-arid environment with mild winters, warm summers, moderate temperatures, and comfortable humidity. Precipitation is limited to a few winter storms. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100°F in recent years.

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically nine to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from

entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

Criteria Air Pollutants

Carbon Monoxide (CO). CO is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. CO replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes are most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of CO.

Ozone (O_3). O_3 occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" O_3 layer) extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays. "Bad" O_3 is a photochemical pollutant, and needs volatile organic compounds (VOCs), nitrogen oxides (NO_X), and sunlight to form; therefore, VOCs and NO_X are O_3 precursors. To reduce O_3 concentrations, it is necessary to control the emissions of these O_3 precursors. Significant O_3 formation generally requires an adequate amount of precursors in the atmosphere and a period of several hours in a stable atmosphere with strong sunlight. High O_3 concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While O_3 in the upper atmosphere (stratosphere) protects the earth from harmful ultraviolet radiation, high concentrations of ground-level O_3 (in the troposphere) can adversely affect the human respiratory system and other tissues. O_3 is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children, and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of O_3. Short-term exposure (lasting for a few hours) to O_3 at elevated levels can result in aggravated respiratory diseases such as emphysema, bronchitis and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue, as well as chest pain, dry throat, headache, and nausea.

Nitrogen Dioxide (NO_2). NO_X are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3 and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at elevated levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations). NO_2 can irritate and damage the lungs and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory

illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than 10 microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003, the California Air Resources Board (CARB) adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the United States Supreme Court reversed this decision and upheld the EPA's new standards.

On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for Federal $PM_{2.5}$ standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging. On July 8, 2016, EPA made a finding that the South Coast has attained the 1997 24-hour and annual $PM_{2.5}$ standards based on 2011-2013 data. However, the Basin remains in nonattainment as the EPA has not determined that California has met the Federal Clean Air Act requirements for redesignating the Basin nonattainment area to attainment.

Sulfur Dioxide (SO_2). Sulfur dioxide (SO_2) is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. Sulfur dioxide is often used interchangeably with SO_X. Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics.

Volatile Organic Compounds (VOC). VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and reactive organic gases (ROG) (see below) are often used interchangeably.

Reactive Organic Gases (ROG). Similar to VOCs, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are

typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC are often used interchangeably.

Local Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The closest air monitoring station to the project site that monitors O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ is the Mira Loma Van Buren Monitoring Station. Local air quality data from 2019 to 2021 is provided in Table 1, *Summary of Air Quality Data*. This table lists the monitored maximum concentrations and number of exceedances of State/Federal air quality standards for each year.

Table 1
Summary of Air Quality Data

Pollutant	California Standard	Federal Primary Standard	Year	Maximum Concentration[1]	Days (Samples) State/Federal Std. Exceeded
Ozone (O_3) (1-hour)[2]	0.09 ppm for 1 hour	NA[5]	2019 2020 2021	0.131 ppm 0.140 ppm 0.116 ppm	26 / 2 51 / 7 20 / 0
Ozone (O_3) (8-hour)[2]	0.070 ppm for 8 hours	0.070 ppm for 8 hours	2019 2020 2021	0.100 ppm 0.117 ppm 0.095 ppm	65 / 64 96 / 89 59 / 53
Carbon Monoxide (CO) (1-hour)[2]	20 ppm for 1 hour	35 ppm for 1 hour	2019 2020 2021	1.983 ppm 1.829 ppm 1.958 ppm	0 / 0 0 / 0 0 / 0
Nitrogen Dioxide (NO_2)[2]	0.018 ppm for 1 hour	0.100 ppm for 1 hour	2019 2020 2021	0.056 ppm 0.058 ppm 0.053 ppm	0 / 0 0 / 0 0 / 0
Fine Particulate Matter ($PM_{2.5}$)[2, 3]	No Separate Standard	35 µg/m^3 for 24 hours	2019 2020 2021	58.2 µg/m^3 66.4 µg/m^3 86.4 µg/m^3	* / 10 * / 12 * / 13
Particulate Matter (PM_{10}) [3, 4]	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours[6]	2019 2020 2021	115.7 µg/m^3 158.2 µg/m^3 96.1 µg/m^3	14 / 0 16 / 1 15 / 0

ppm = parts per million; PM_{10} = particulate matter 10 microns in diameter or less; µg/m^3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; NA = not applicable; * = insufficient data available to determine the value

Notes:
1. Maximum concentration is measured over the same period as the California Standards.
2. Data collected from the Mira Loma Van Buren Monitoring Station located at 5130 Poinsettia Place, Riverside, CA 92509.
3. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.
4. PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5. The Federal standard for 1-hour ozone was revoked in June 2005.
6. The Federal standard for average PM_{10} was revoked in December 2006.

Sources:
California Air Resources Board, *ADAM Air Quality Data Statistics*, http://www.arb.ca.gov/adam/, accessed August 17, 2022.
California Air Resources Board, *AQMIS2: Air Quality Data*, https://www.arb.ca.gov/aqmis2/aqdselect.php, accessed August 17, 2022.

REGULATORY SETTING

South Coast Air Quality Management District

Air Quality Thresholds

Under the California Environmental Quality Act (CEQA), the South Coast Air Quality Management District (SCAQMD) is an expert commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the Federal Clean Air Act (FCAA), the SCAQMD has adopted Federal attainment plans for ozone (O_3) and particulate matter 10 microns in diameter or less (PM_{10}). The SCAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any Federal attainment plan.

The *CEQA Air Quality Handbook* also provides significance thresholds for both construction and operation of projects within the SCAQMD jurisdictional boundaries. If the SCAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the lead agency determines the thresholds of significance for impacts. If a project proposes development in excess of the established thresholds, as outlined in Table 2, *South Coast Air Quality Management District Emissions Thresholds*, a significant air quality impact may occur, and additional analysis is warranted to fully assess the significance of impacts.

Table 2
South Coast Air Quality Management District Emissions Thresholds

Phase	Pollutant (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction	75	100	550	150	150	55
Operational	55	55	550	150	150	55
ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns; lbs = pounds						
Source: South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993.						

Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated July 2008) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects. The SCAQMD provides the LST lookup tables for one-, two-, and five-acre projects emitting CO, NO_X, PM_{10}, or $PM_{2.5}$. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors.

Cumulative Emissions Thresholds

The SCAQMD's *2016 Air Quality Management Plan* (2016 AQMP) was prepared to accommodate growth, meet State and Federal air quality standards, and minimize the fiscal impact that pollution control

measures have on the local economy. According to the SCAQMD *CEQA Air Quality Handbook*, project-related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary. If a project exceeds these emission thresholds, the SCAQMD *CEQA Air Quality Handbook* states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

City of Jurupa Valley

2017 General Plan

The City adopted the 2017 *General Plan* (General Plan) in September 2017. The General Plan includes numerous goals, policies, and programs that would reduce air emissions generated by land uses within the City. This Element is specifically designed to reduce the City's air pollutant emissions and comply with Statewide goals. The Air Quality Element of the General Plan, contains the following policies applicable to the project that reduce potential air quality impacts:

Goal AQ 1 Work with regional, sub-regional, and state agencies to protect and improve air quality and reduce greenhouse gas emissions.

> **Policy AQ 1.1 Regional Participation**. Promote and participate with regional, subregional, and state agencies, both public and private, in all areas to protect and improve air quality, including enforcement of all regulations.
>
> **Policy AQ 1.2 Air Quality Measures**. Establish and implement air quality, land use, and mobility measures that improve not only the City's environment but also that of the entire region.

Goal AQ 2 Helps protect its residents, and especially senior citizens, youth and other sensitive receptors, from toxic air pollution.

> **Policy AQ 2.1 Site Plan Designs**. Require City land use planning efforts and site plan designs to protect people and land uses sensitive to air pollution, using barriers and/or distance from emissions sources, and protect sensitive receptors from polluting sources, wherever possible.
>
> **Policy AQ 2.2 Pollution Control Measures**. Strongly encourage the use of pollution control measures such as landscaping, vegetation and other materials that trap particulate matter or control pollution.

Goal AQ 3 Works to reduce emissions from stationary and mobile sources.

> **Policy AQ 3.1 Efficient Building Materials/Equipment**. Encourage the use of building materials/methods and heating equipment that are efficient and reduce emissions.
>
> **Policy AQ 3.2 Centrally Heated Facilities**. Encourage centrally heated facilities to utilize automated time clocks or occupant sensors to control heating.
>
> **Policy AQ 3.3 Stationary Pollution Reduction**. Require stationary pollution sources to prevent the release of toxic pollutants through the following:

1. Design features;
2. Operating procedures;
3. Preventive maintenance;
4. Operator training; and
5. Emergency response planning

Policy AQ 3.4 Emissions Mitigation. Require every project to mitigate any of its anticipated emissions that exceed allowable levels as established by the SCAQMD, the US EPA, and CARB, to the greatest extent possible.

Policy AQ 3.5 Fugitive Dust Reduction Measures. Apply, as appropriate, measures contained in the County's Fugitive Dust Reduction to the entire City.

Policy AQ 3.6 Grading in High Winds. Suspend all grading when wind speeds exceed 25 miles per hour.

Goal AQ 4 Employs measures to improve the jobs/housing balance and reduce commuting time.

Policy AQ 4.1 State and Federal Legislation. Encourage stricter state and federal legislation on bias-belted tires, smoking vehicles, and vehicles that spill debris on streets and highways, to better control particulate matter.

Policy AQ 4.2 Particulate Matter. Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights of way, and off-road vehicles to the maximum extent possible.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) THRESHOLDS

The environmental analysis in this memorandum is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact AQ-1);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (refer to Impact AQ-2);
- Expose sensitive receptors to substantial pollutant concentrations (refer to Impact AQ-3); and/or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (refer to Impact AQ-4).

IMPACT ANALYSIS

Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The City is located within the South Coast Air Basin (Basin), which is bounded by the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east and by the Pacific Ocean to the south and west. The SCAQMD has jurisdiction in the Basin, which has a history of recorded air quality violations and is an area where both State and Federal ambient air quality standards are exceeded. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The air quality in the Riverside County portion of the Basin does not meet the ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$ and is therefore classified as a nonattainment area for these pollutants. The SCAQMD is required, pursuant to the Federal Clean Air Act, to reduce emissions of the air pollutants for which the Basin is in nonattainment.

In order to reduce emissions, the SCAQMD adopted the 2016 AQMP which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving State and Federal air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, the Southern California Association of Governments (SCAG), and the U.S. EPA.

The 2016 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016-2040 RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. While SCAG has recently adopted the *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS), the SCAQMD has not released an updated AQMP that utilizes information from the 2020-2045 RTP/SCS. The SCAQMD is planning to release the updated AQMP in 2022. As such, this consistency analysis is based off the 2016 AQMP and the 2016-2040 RTP/SCS. The SCAQMD considers projects that are consistent with the 2016 AQMP, which is intended to bring the Basin into attainment for all criteria pollutants, to also have less than significant cumulative impacts.

Criteria for determining consistency with the AQMP are defined by the following indicators:

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) *Would the project result in an increase in the frequency or severity of existing air quality violations?*

Since the consistency criteria identified under the first criterion pertains to pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed in Impact AQ-3, below, localized concentrations of CO, NO_X, and particulate matter (PM_{10} and $PM_{2.5}$) would be less than significant during project construction and operations. Therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations. Further, although there is no ambient standard or localized threshold for ROGs, due to the role ROGs play in O_3 formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established. It is noted that emission of ROGs as a result of the proposed project would not exceed the regional emissions

threshold; refer to Impact AQ-2, below. As such, less than significant impact would occur in this regard.

b) *Would the project cause or contribute to new air quality violations?*

As discussed below in Impacts AQ-2 and AQ-3, the proposed project would result in emissions that would be below the SCAQMD's thresholds for regional and localized emissions. Therefore, the proposed project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The proposed project would result in less than significant impacts with regard to localized concentrations during project construction and operation. As such, the proposed project would not delay the timely attainment of air quality standards or 2016 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the 2016 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

Growth projections included in the 2016 AQMP form the basis for the projections of air pollutant emissions and are based on general plan land use designations and SCAG's 2016-2040 RTP/SCS demographics forecasts. The population, housing, and employment forecasts within the 2016-2040 RTP/SCS are based on local general plans as well as input from local governments, such as the City. The SCAQMD has incorporated these same demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment) into the 2016 AQMP.

The project proposes the development of a shopping center (78,325 square feet) with a 408 stalls surface parking lot. Based on the General Plan, the project site is designated Commercial Retail, which allows a maximum of 0.35 floor area ratio (FAR) and one employee per 600 square feet. The Commercial Retail land use designation allows for the development of a broad range of retail commercial and services, including professional office and visitor-serving commercial uses. Based on *City of Jurupa Valley Zoning Map* (January 2019), the project site is zoned as C-1/C-P, General Commercial, which is consistent with General Plan land use designation. The project would have a FAR of 0.22 (78,325 square feet building over approximately 361,548 square feet land). As such, the proposed project would be consistent with the site's land use designation, and consistent with the types, intensity, and patterns of land use envisioned for the site vicinity.

The City's population estimate as of January 1, 2021 is 108,097 persons.[3] While the project does not involve residential development, the project would increase employment and could indirectly induce population growth if future employees move into the City to work at the shopping center. Assuming the maximal employment density of one employee per 600 square feet allowed for the project site by the City's General Plan, the project would generate approximately 131 employees. While it is likely that future employees already live in the City or would commute in from neighboring jurisdictions, this analysis conservatively assumes all 131 future employees would move into the City for employment. Based on an average household size of 3.89[4], the project would result in an indirect population increase of approximately 510 persons.

SCAG growth forecasts in the 2016-2040 RTP/SCS estimate the City's population to reach 114,500 persons by 2040, representing a total increase of 15,400 persons between 2012 and 2040.[5] The project's potential indirect population growth (510 persons) represents approximately 3.31 percent of the City's anticipated population increase by 2040, and only 0.45 percent of the City's total projected 2040 population.

Additionally, SCAG growth forecasts in the 2016-2040 RTP/SCS estimate the City's employment to reach 32,600 jobs by 2040, representing a total increase of 8,100 jobs between 2012 and 2040.[6] The approximately 131 project-generated jobs represent 1.62 percent of the City's anticipated jobs increase by 2040, and only 0.40 percent of the City's total projected 2040 employment.

Therefore, the indirectly induced population growth as a result of the proposed project would not cause the SCAG growth forecast to be exceeded. As the SCAQMD has incorporated these forecasts on population, housing, and employment into the 2016 AQMP, it could be concluded that the proposed project would be consistent with the 2016 AQMP.

b) *Would the project implement all feasible air quality mitigation measures?*

The proposed project would not require mitigation and would result in less than significant air quality impacts; refer to Impacts AQ-2 and AQ-3. In addition, the project would comply with all applicable SCAQMD rules and regulations, including Rule 403 that requires excessive fugitive dust emissions controlled by regular watering or other dust prevention measures and Rule 1113 that regulates the ROG content of paint. As such, the proposed project meets this AQMP consistency criterion.

c) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

Land use planning strategies set forth in the 2016 AQMP are primarily based on the 2016-2040 RTP/SCS. The project is an infill development and is located less than 0.1-mile from transit stations. Further, the project would provide bicycle parking spaces and electric vehicle charging stations on-site to promote alternative transportation options. Therefore, the project would be

[3] State of California Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark*, May 2021.

[4] Ibid.

[5] Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy Demographics & Growth Forecast Appendix*, April 2016.

[6] Ibid.

consistent with the actions and strategies of the 2016-2040 RTP/SCS. In addition, as discussed above, the project would be consistent with the General Plan land use designation. Furthermore, project consistency with the SCAG RTP/SCS and the 2016 AQMP would promote the City's goal to protect air quality by incorporating Jurupa Valley Air Quality Element goals and policies. As such, the proposed project meets this AQMP consistency criterion.

In conclusion, the determination of 2016 AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The proposed project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. Also, the proposed project would be consistent with the goals and policies of the 2016 AQMP for control of fugitive dust; refer to Impact Statement AQ-2. As discussed above, the proposed project's long-term influence would also be consistent with the SCAQMD and SCAG's goals and policies and is, therefore, considered consistent with the 2016 AQMP.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact.

Short-Term Construction

The project involves construction activities associated with demolition, grading, building construction, paving, and architectural coating applications. The project would be constructed in a single phase, with construction anticipated to begin in November 2022 and be completed in 2023. Exhaust emission factors for typical diesel-powered heavy equipment are based on the California Emissions Estimator Model version 2020.4.0 (CalEEMod) program defaults. Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site. The analysis of daily construction emissions has been prepared using CalEEMod. Refer to Appendix A, *Air Quality Emissions Data*, for the CalEEMod outputs and results. Table 3, *Short-Term Construction Emissions*, presents the anticipated daily short-term construction emissions.

Table 3
Short-Term Construction Emissions

Construction Related Emissions	Pollutant (pounds/day)[1,2]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 1 (2022)	4.18	40.50	36.42	0.08	6.15	3.41
Year 2 (2023)	20.57	35.55	35.44	0.08	5.85	3.13
Maximum Daily Emissions	***20.57***	***40.50***	***36.42***	***0.08***	***6.15***	***3.41***
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod, version 2020.4.0. Winter emissions represent worst-case scenario and is therefore presented as a conservative analysis.
2. The reduction/credits for construction emissions are based on adjustments to CalEEMod and are required by the SCAQMD Rules. The adjustments applied in CalEEMod includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; and limit speeds on unpaved roads to 15 miles per hour.

Source: Refer to Appendix A, *Air Quality Emissions Data*, for detailed model input/output data.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from demolition, site preparation, and construction is expected to be short-term and would cease upon project completion. It should be noted that most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM_{10} (particulate matter smaller than 10 microns) generated as a part of fugitive dust emissions. PM_{10} poses a serious health hazard alone or in combination with other pollutants. $PM_{2.5}$ is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. $PM_{2.5}$ is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and SO_X combining with ammonia. $PM_{2.5}$ components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Construction activities would comply with SCAQMD Rule 402, which requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site, and Rule 403, which requires that excessive fugitive dust emissions be controlled by regular watering or other dust prevention measures. Adherence to SCAQMD Rule 403 would greatly reduce PM_{10} and $PM_{2.5}$ concentrations. It should be noted that these estimated reductions were applied in CalEEMod. As depicted in Table 3, total PM_{10}

and $PM_{2.5}$ emissions would not exceed the SCAQMD thresholds during construction upon implementation of the SCAQMD Rules. Thus, construction-related air quality impacts would be less than significant.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions (e.g., NO_x and CO) from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As presented in Table 3, construction equipment and worker vehicle exhaust emissions would be below the established SCAQMD thresholds. Therefore, air quality impacts from equipment and vehicle exhaust emission would be less than significant.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. As required, all architectural coatings for the proposed project structures would comply with SCAQMD Regulation XI, Rule 1113 – Architectural Coating. Rule 1113 provides specifications on painting practices as well as regulates the ROG content of paint. ROG emissions associated with the proposed project would be less than significant; refer to Table 3.

Total Daily Construction Emissions

In accordance with the SCAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. As indicated in Table 3, criteria pollutant emissions during construction of the proposed project would not exceed the SCAQMD significance thresholds. Thus, total construction related air emissions would be less than significant.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed.

According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (August 2000), serpentinite and ultramafic rocks are not known to occur within the project area. Thus, there would be no impact in this regard.

Long-Term (Operational) Emissions

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$); however, CO tends to be a localized pollutant, dispersing rapidly at the source. The mobile source emissions were calculated using the trip generation data provided in the *Mission Village Shopping Center Transportation Impact Analysis* (Transportation Impact Analysis) developed by Translutions, Inc. (dated May 2022)[7]. It should be noted that CalEEMod default trip length of 8.4 miles per trip for commercial development located within SCAQMD jurisdiction was reduced to 3 miles per trip to account for the proposed project's location in a high-density area. According to the project study area of the Transportation Impact Analysis and an aerial review of the project's vicinity, the majority of the project's trips would come from nearby residential communities located within 3 miles. There are several local retail centers within 3 miles radius of the project site. Therefore, the trip length assumption of 3 miles per trip is appropriate for the project. Table 4, *Long-Term Operational Air Emissions*, presents the anticipated mobile source emissions. As shown in Table 4, emissions generated by vehicle traffic associated with the project would not exceed established SCAQMD thresholds. Impacts from mobile source emissions would be less than significant.

Table 4
Long-Term Operational Air Emissions

Emissions Source	Pollutant (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project Summer Emissions						
Area Source Emissions	1.72	<0.01	0.05	0.00	<0.01	<0.01
Energy Emissions[2]	0.06	0.56	0.47	<0.01	0.04	0.04
Mobile Emissions[3]	11.60	11.02	77.33	0.15	14.58	3.97
Total Emissions[4]	**13.38**	**11.59**	**77.86**	**0.15**	**14.63**	**4.02**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Proposed Project Winter Emissions						
Area Source Emissions	1.72	<0.01	0.05	0.00	<0.01	<0.01
Energy Emissions[2]	0.06	0.56	0.47	<0.01	0.04	0.04
Mobile Emissions[3]	9.45	11.68	71.55	0.14	14.58	3.97
Total Emissions[4]	**11.23**	**12.24**	**72.07**	**0.14**	**14.63**	**4.02**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod, version 2020.4.0.
2. The energy source emissions included reductions from project design features, including exceeding 2019 Title 24 standards by 10 percent, and installing high efficiency lighting fixtures that would be 10 percent more efficient than 2019 Title 24 standards.
3. The mobile source emissions were calculated using the trip generation data provided in the Translutions, Inc., *Mission Village Shopping Center Transportation Impact Analysis*, dated May 2022.
4. The numbers may be slightly off due to rounding.

Source: Refer to Appendix A, for detailed model input/output data.

[7] Translutions, Inc., *Mission Village Shopping Center Transportation Impact Analysis*, May 2022.

Area Source Emissions

Area source emissions would be generated due to an increased demand for natural gas, consumer products, area architectural coatings, and landscaping equipment associated with the development of the proposed project. As shown in Table 4, area source emissions from the proposed project would not exceed SCAQMD thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed project. The primary use of electricity and natural gas by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. The project would exceed 2019 Title 24 standards by 10 percent, and install high efficiency lighting fixtures that would be 10 percent more efficient than 2019 Title 24 standards. These project design features would reduce energy source emissions and have been accounted for in Table 4. As shown in Table 4, energy source emissions from the proposed project would not exceed SCAQMD thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Air Quality Health Impacts

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, ozone precursors VOCs and NO_x affect air quality on a regional scale. Health effects related to ozone are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the project's less than significant increases in regional air pollution from criteria air pollutants would have nominal or negligible impacts on human health.

As noted in the Brief of Amicus Curiae by the SCAQMD,[8] the SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. Further, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD),[9] SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that health effects quantification from ozone, as an example is correlated with the increases in ambient level of ozone in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient ozone levels over the entire region. The SCAQMD states that based on

[8] South Coast Air Quality Management District, *Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, 2014.

[9] San Joaquin Valley Air Pollution Control District, *Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, 2014.

their own modeling in the SCAQMD's *2012 Air Quality Management Plan*, a reduction of 432 tons (864,000 pounds) per day of NO_X and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce ozone levels at highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify ozone-related health impacts caused by NO_X or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. As such, for the purpose of this analysis, since the project would not exceed SCAQMD thresholds for construction and operational air emissions, the project would have a less than significant impact for air quality health impacts as well.

Cumulative Conclusion

With respect to the proposed project's construction-related air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to FCAA mandates. As such, the proposed project would comply with SCAQMD Rules 402 and 403 requirements and the adopted 2016 AQMP emissions control measures. SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site, and Rule 403 requires that excessive fugitive dust emissions be controlled by regular watering or other dust prevention measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rules 402, 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted 2016 AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

As indicated in Table 3 and Table 4, the proposed project would not result in short- or long-term air quality impacts, as emissions would not exceed the SCAQMD adopted construction or operational thresholds. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. As a result, the proposed project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, the project's incremental operational impacts would be less than cumulatively considerable and impacts in this regard are less than significant.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive receptors are residential uses located approximately 120 feet north of the project site and 140 feet south of the project site, and an elementary school (Rustic Lane Elementary School) located approximately 50 feet southwest of the project site. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds (LSTs) for construction

and operations impacts (area sources only). The CO hotspot analysis, following the LST analysis, addresses localized mobile source impacts.

Localized Significance Thresholds

Local Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST screening lookup tables for projects that disturb/grade one, two, or five acres per day emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres in size should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors from area source emissions. For LST analysis purposes, SCAQMD is divided into 38 Source Receptor Areas (SRAs), each of which contain specific localized air quality emission thresholds for CO, NO_X, $PM_{2.5}$, and PM_{10} to determine local air quality impacts. The project is located within the SRA 23 (Metropolitan Riverside County).

Construction

The SCAQMD guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day. SCAQMD provides LST thresholds for one-, two-, and five-acre site disturbance areas; SCAQMD does not provide LST thresholds for projects over five acres. Based on default information provided by CalEEMod, the project is anticipated to disturb up to 66 acres during the grading phase. The grading phase would take approximately 66 days in total to complete. As such, the project would actively disturb an average of approximately one acre per day (66 acres divided by 66 days) and the LST thresholds for one-acre were utilized for the construction LST analysis. Further, the nearest sensitive receptors would be located approximately 120 feet north of the of the proposed construction area of the project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. As the nearest sensitive receptor is located approximately 120 feet (37 meter) from the planned construction area, the LST values for 25 meters were conservatively used.

Table 5, *Localized Significance of Construction Emissions*, shows the localized construction-related emissions. It is noted that the localized emissions presented in Table 5 are less than those in Table 3 because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from worker, vendor, and hauling trips). As seen in Table 5, emissions would not exceed the LSTs for SRA 23. Construction LST impacts would be less than significant in this regard.

Table 5
Localized Significance of Construction Emissions

Maximum Emissions	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Year 1 (2022) [1,3]	25.72	20.59	1.24	1.16
Year 2 (2023) [2,3]	17.94	16.24	0.77	0.71
Localized Significance Threshold[4]	118	602	4	3
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Note:
1. The demolition phase (2022) emissions would present the worst-case scenario for NO_X, CO, PM_{10}, and $PM_{2.5}$.
2. The grading phase (2023) emissions would present the worst-case scenario for NO_X, PM_{10}, and $PM_{2.5}$, and the building construction phase (2023) emissions would present the worst-case scenario for CO.
3. The reduction/credits for construction emissions are based on adjustments to CalEEMod and are required by the SCAQMD Rules. The adjustments applied in CalEEMod includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; and limit speeds on unpaved roads to 15 miles per hour.
4. The Localized Significance Threshold was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (the thresholds for one-acre were used), the LST thresholds of 25 meters based on the distance to sensitive receptors (37 meters), and the source receptor area (SRA 23).

Operations

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). The proposed project does not include such uses. Thus, due to the lack of such emissions, no long-term localized significance threshold analysis is necessary. Operational LST impacts would be less than significant in this regard.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service LOS D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections.

The Basin is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. Nationwide estimated anthropogenic CO emissions have decreased 68 percent between 1990 and 2014. In 2014, mobile sources accounted for 82 percent of

the nation's total anthropogenic CO emissions.[10] CO emissions have continued to decline since this time. The Basin was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the Federal Attainment Plan for Carbon Monoxide (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*, which is the most recent AQMP that addresses CO concentrations. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the proposed project, since it represents a worst-case scenario with heavy traffic volumes within the Basin.

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an ADT volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections within the City near the project site due to the comparatively low volume of traffic that would occur as a result of project implementation (4,659 daily trips, including 239 a.m. peak hour trips and 428 p.m. peak hour trips during weekdays, and 534 Saturday peak hour trips). Therefore, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

Impact AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon project completion. In addition, the project would be required to comply with the California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. The project would also comply with the SCAQMD Regulation XI, *Rule 1113 – Architectural Coating*, which would minimize odor impacts from ROG emissions during architectural coating. Any impacts to existing adjacent land uses would be short-term and are less than significant.

Mitigation Measures: No mitigation is required.

[10] United States Environmental Protection Agency, *Carbon Monoxide Emissions*, https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10, accessed August 25, 2022.

REFERENCES

Documents

1. California Air Resources Board, *ADAM Air Quality Data Statistics*, http://www.arb.ca.gov/adam/, accessed August 17, 2022.

2. California Air Resources Board, *AQMIS2: Air Quality Data*, https://www.arb.ca.gov/aqmis2/aqdselect.php, accessed August 17, 2022.

3. City of Jurupa Valley, *2017 General Plan*, September 2017.

4. City of Jurupa Valley, *City of Jurupa Valley Zoning Map*, January 3, 2019.

5. San Joaquin Valley Air Pollution Control District, *Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno, 2014.*

6. South Coast Air Quality Management District, *Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, 2014.

7. South Coast Air Quality Management District, *CEQA Air Quality Handbook,* November 1993.

8. South Coast Air Quality Management District, *Final 2016 Air Quality Management Plan*, March 2017.

9. South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, July 2008.

10. South Coast Air Quality Management District, *SCAQMD Air Quality Significance Thresholds*, March 2015.

11. Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy Demographics & Growth Forecast,* April 2016.

12. State of California Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark*, May 2021.

13. Translutions, Inc., *Mission Village Shopping Center Transportation Impact Analysis*, May 2022.

14. United States Environmental Protection Agency¸ *Carbon Monoxide Emissions*, https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10, accessed August 25, 2022.

Websites / Programs

1. Google Earth, 2022.

2. South Coast Air Quality Management District, California Emissions Estimator Model (CalEEMod), version 2020.4.0.

Appendix A
Air Quality Emissions Data

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

Mission Village Shopping Center

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	408.00	Space	6.50	163,200.00	0
Fast Food Restaurant with Drive Thru	2.90	1000sqft	0.07	2,900.00	0
Health Club	18.00	1000sqft	0.41	18,000.00	0
Quality Restaurant	1.00	1000sqft	0.02	1,000.00	0
Automobile Care Center	3.83	1000sqft	0.09	3,825.00	0
Strip Mall	34.60	1000sqft	0.79	34,600.00	0
Supermarket	18.00	1000sqft	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - PER SITE PLAN

Construction Phase - PER AQ CONSTRUCTION QUESTIONNAIRE

Off-road Equipment -

Off-road Equipment - as an conservative analysis

Off-road Equipment -

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

Trips and VMT - per cosntruction questionnaire

Demolition - per demolished building dimensions

Grading -

Architectural Coating - Rule 1113

Vehicle Trips - per traffic study. Trip gen includes pass-by trip and internal trip credits. Trip length adjusted to account for high density location setting.

Area Coating - Rule 1113

Water And Wastewater - Car wash water use: 12 gallons/car * 597 trips/day * 365 days/year

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - rule 1113

Energy Mitigation - per operation questionnaire

Water Mitigation - per operational questionnaire

Waste Mitigation - per oeprational questionnaire

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	230.00	196.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	20.00	23.00
tblGrading	MaterialExported	0.00	13,100.00
tblLandUse	LandUseSquareFeet	3,830.00	3,825.00
tblLandUse	LotAcreage	3.67	6.50
tblTripsAndVMT	HaulingTripLength	20.00	10.00

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

tblTripsAndVMT	HaulingTripLength	20.00	10.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	44.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	21.00	49.00
tblVehicleTrips	PR_TP	29.00	79.00
tblVehicleTrips	PR_TP	52.00	61.00
tblVehicleTrips	PR_TP	38.00	82.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	PR_TP	34.00	70.00
tblVehicleTrips	ST_TR	23.72	106.82
tblVehicleTrips	ST_TR	616.12	243.31
tblVehicleTrips	ST_TR	20.87	21.40
tblVehicleTrips	ST_TR	90.04	241.20
tblVehicleTrips	ST_TR	42.04	51.01
tblVehicleTrips	ST_TR	177.62	64.20
tblVehicleTrips	SU_TR	11.88	106.82
tblVehicleTrips	SU_TR	472.58	243.31
tblVehicleTrips	SU_TR	26.73	21.40

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

tblVehicleTrips	SU_TR	71.97	241.20
tblVehicleTrips	SU_TR	20.43	51.01
tblVehicleTrips	SU_TR	166.47	64.20
tblVehicleTrips	WD_TR	23.72	106.82
tblVehicleTrips	WD_TR	470.95	243.31
tblVehicleTrips	WD_TR	32.93	21.40
tblVehicleTrips	WD_TR	83.84	241.20
tblVehicleTrips	WD_TR	44.32	51.01
tblVehicleTrips	WD_TR	106.78	64.20
tblWater	OutdoorWaterUseRate	220,847.81	2,614,860.00

2.0 Emissions Summary

Mission Village Shopping Center - Riverside-South Coast 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					
2022	4.2131	40.2898	37.2157	0.0827	8.8221	1.7990	10.6211	3.8910	1.6736	5.5645	0.0000	8,148.8980	8,148.8980	1.5886	0.2692	8,268.8435
2023	20.5978	35.3654	36.1729	0.0817	8.8221	1.5070	10.3290	3.8910	1.4020	5.2930	0.0000	8,054.5947	8,054.5947	1.5812	0.2567	8,170.6123
Maximum	**20.5978**	**40.2898**	**37.2157**	**0.0827**	**8.8221**	**1.7990**	**10.6211**	**3.8910**	**1.6736**	**5.5645**	**0.0000**	**8,148.8980**	**8,148.8980**	**1.5886**	**0.2692**	**8,268.8435**

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					
2022	4.2131	40.2898	37.2157	0.0827	4.3478	1.7990	6.1468	1.7327	1.6736	3.4063	0.0000	8,148.8980	8,148.8980	1.5886	0.2692	8,268.8435
2023	20.5978	35.3654	36.1729	0.0817	4.3478	1.5070	5.8547	1.7327	1.4020	3.1348	0.0000	8,054.5947	8,054.5947	1.5812	0.2567	8,170.6123
Maximum	**20.5978**	**40.2898**	**37.2157**	**0.0827**	**4.3478**	**1.7990**	**6.1468**	**1.7327**	**1.6736**	**3.4063**	**0.0000**	**8,148.8980**	**8,148.8980**	**1.5886**	**0.2692**	**8,268.8435**

Mission Village Shopping Center - Riverside-South Coast 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	50.72	0.00	42.71	55.47	0.00	39.76	0.00	0.00	0.00	0.00	0.00	0.00

Mission Village Shopping Center - Riverside-South Coast 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	1.7189	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Energy	0.0647	0.5881	0.4940	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.7006	705.7006	0.0135	0.0129	709.8943
Mobile	11.6011	11.0239	77.3337	0.1512	14.4611	0.1232	14.5843	3.8583	0.1153	3.9736		15,555.4634	15,555.4634	1.0127	0.8595	15,836.8966
Total	**13.3847**	**11.6124**	**77.8773**	**0.1548**	**14.4611**	**0.1680**	**14.6292**	**3.8583**	**0.1602**	**4.0185**		**16,261.2705**	**16,261.2705**	**1.0265**	**0.8724**	**16,546.9043**

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	1.7189	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Energy	0.0620	0.5633	0.4732	3.3800e-003		0.0428	0.0428		0.0428	0.0428		675.9598	675.9598	0.0130	0.0124	679.9767
Mobile	11.6011	11.0239	77.3337	0.1512	14.4611	0.1232	14.5843	3.8583	0.1153	3.9736		15,555.4634	15,555.4634	1.0127	0.8595	15,836.8966
Total	**13.3820**	**11.5877**	**77.8565**	**0.1546**	**14.4611**	**0.1662**	**14.6273**	**3.8583**	**0.1583**	**4.0166**		**16,231.5296**	**16,231.5296**	**1.0259**	**0.8718**	**16,516.9866**

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	**0.02**	**0.21**	**0.03**	**0.10**	**0.00**	**1.12**	**0.01**	**0.00**	**1.17**	**0.05**	**0.00**	**0.18**	**0.18**	**0.06**	**0.06**	**0.18**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2022	11/28/2022	5	20	
2	Grading	Grading	11/29/2022	2/28/2023	5	66	
3	Building Construction	Building Construction	12/1/2022	8/31/2023	5	196	
4	Paving	Paving	3/1/2023	3/31/2023	5	23	
5	Architectural Coating	Architectural Coating	7/1/2023	7/31/2023	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 6.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 117,488; Non-Residential Outdoor: 39,163; Striped Parking Area: 9,792 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	15.00	0.00	60.00	14.70	6.90	10.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,638.00	14.70	6.90	10.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	96.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.2 Demolition - 2022

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					
Fugitive Dust					0.6537	0.0000	0.6537	0.0990	0.0000	0.0990			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**0.6537**	**1.2427**	**1.8963**	**0.0990**	**1.1553**	**1.2542**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	6.7400e-003	0.2229	0.0685	9.1000e-004	0.0263	2.2500e-003	0.0285	7.2100e-003	2.1500e-003	9.3600e-003		97.1274	97.1274	1.3500e-003	0.0153	101.7202
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	0.0591	0.0383	0.5980	1.5200e-003	0.1677	8.4000e-004	0.1685	0.0445	7.7000e-004	0.0452		155.0309	155.0309	3.8400e-003	3.8100e-003	156.2632
Total	**0.0659**	**0.2612**	**0.6665**	**2.4300e-003**	**0.1940**	**3.0900e-003**	**0.1970**	**0.0517**	**2.9200e-003**	**0.0546**		**252.1582**	**252.1582**	**5.1900e-003**	**0.0191**	**257.9833**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.2 Demolition - 2022

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					
Fugitive Dust					0.2422	0.0000	0.2422	0.0367	0.0000	0.0367			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**0.2422**	**1.2427**	**1.4848**	**0.0367**	**1.1553**	**1.1919**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	6.7400e-003	0.2229	0.0685	9.1000e-004	0.0263	2.2500e-003	0.0285	7.2100e-003	2.1500e-003	9.3600e-003		97.1274	97.1274	1.3500e-003	0.0153	101.7202
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	0.0591	0.0383	0.5980	1.5200e-003	0.1677	8.4000e-004	0.1685	0.0445	7.7000e-004	0.0452		155.0309	155.0309	3.8400e-003	3.8100e-003	156.2632
Total	**0.0659**	**0.2612**	**0.6665**	**2.4300e-003**	**0.1940**	**3.0900e-003**	**0.1970**	**0.0517**	**2.9200e-003**	**0.0546**		**252.1582**	**252.1582**	**5.1900e-003**	**0.0191**	**257.9833**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.3 Grading - 2022

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					
Fugitive Dust					7.1077	0.0000	7.1077	3.4285	0.0000	3.4285			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.1077**	**0.9409**	**8.0486**	**3.4285**	**0.8656**	**4.2941**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0557	1.8441	0.5664	7.5300e-003	0.2175	0.0186	0.2361	0.0596	0.0178	0.0774		803.5082	803.5082	0.0111	0.1266	841.5034
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	0.0591	0.0383	0.5980	1.5200e-003	0.1677	8.4000e-004	0.1685	0.0445	7.7000e-004	0.0452		155.0309	155.0309	3.8400e-003	3.8100e-003	156.2632
Total	**0.1148**	**1.8824**	**1.1644**	**9.0500e-003**	**0.3851**	**0.0194**	**0.4046**	**0.1041**	**0.0186**	**0.1227**		**958.5391**	**958.5391**	**0.0150**	**0.1304**	**997.7666**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.3 Grading - 2022

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					
Fugitive Dust					2.6334	0.0000	2.6334	1.2703	0.0000	1.2703			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**2.6334**	**0.9409**	**3.5743**	**1.2703**	**0.8656**	**2.1359**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0557	1.8441	0.5664	7.5300e-003	0.2175	0.0186	0.2361	0.0596	0.0178	0.0774		803.5082	803.5082	0.0111	0.1266	841.5034
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	0.0591	0.0383	0.5980	1.5200e-003	0.1677	8.4000e-004	0.1685	0.0445	7.7000e-004	0.0452		155.0309	155.0309	3.8400e-003	3.8100e-003	156.2632
Total	**0.1148**	**1.8824**	**1.1644**	**9.0500e-003**	**0.3851**	**0.0194**	**0.4046**	**0.1041**	**0.0186**	**0.1227**		**958.5391**	**958.5391**	**0.0150**	**0.1304**	**997.7666**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.3 Grading - 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					
Fugitive Dust					7.1077	0.0000	7.1077	3.4285	0.0000	3.4285			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.1077**	**0.7749**	**7.8826**	**3.4285**	**0.7129**	**4.1415**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.0437	1.4873	0.5680	7.2000e-003	0.2175	0.0151	0.2325	0.0596	0.0144	0.0741		768.7244	768.7244	0.0112	0.1211	805.0982
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	0.0548	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.0985**	**1.5211**	**1.1183**	**8.6700e-003**	**0.3851**	**0.0159**	**0.4010**	**0.1041**	**0.0152**	**0.1193**		**919.6549**	**919.6549**	**0.0146**	**0.1246**	**957.1635**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					2.6334	0.0000	2.6334	1.2703	0.0000	1.2703			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.6334**	**0.7749**	**3.4083**	**1.2703**	**0.7129**	**1.9832**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.0437	1.4873	0.5680	7.2000e-003	0.2175	0.0151	0.2325	0.0596	0.0144	0.0741		768.7244	768.7244	0.0112	0.1211	805.0982
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	0.0548	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.0985**	**1.5211**	**1.1183**	**8.6700e-003**	**0.3851**	**0.0159**	**0.4010**	**0.1041**	**0.0152**	**0.1193**		**919.6549**	**919.6549**	**0.0146**	**0.1246**	**957.1635**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.4 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0651	1.6914	0.5881	7.2800e-003	0.2562	0.0244	0.2806	0.0738	0.0233	0.0971		771.7814	771.7814	8.1700e-003	0.1145	806.0922
Worker	0.3783	0.2452	3.8271	9.7500e-003	1.0731	5.3500e-003	1.0784	0.2846	4.9200e-003	0.2895		992.1976	992.1976	0.0246	0.0244	1,000.0842
Total	**0.4434**	**1.9366**	**4.4152**	**0.0170**	**1.3293**	**0.0297**	**1.3590**	**0.3584**	**0.0283**	**0.3866**		**1,763.9789**	**1,763.9789**	**0.0328**	**0.1389**	**1,806.1764**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.4 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0651	1.6914	0.5881	7.2800e-003	0.2562	0.0244	0.2806	0.0738	0.0233	0.0971		771.7814	771.7814	8.1700e-003	0.1145	806.0922
Worker	0.3783	0.2452	3.8271	9.7500e-003	1.0731	5.3500e-003	1.0784	0.2846	4.9200e-003	0.2895		992.1976	992.1976	0.0246	0.0244	1,000.0842
Total	**0.4434**	**1.9366**	**4.4152**	**0.0170**	**1.3293**	**0.0297**	**1.3590**	**0.3584**	**0.0283**	**0.3866**		**1,763.9789**	**1,763.9789**	**0.0328**	**0.1389**	**1,806.1764**

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	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**

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	0.0451	1.3068	0.5381	6.9900e-003	0.2562	0.0114	0.2676	0.0738	0.0109	0.0847		741.0840	741.0840	7.5600e-003	0.1095	773.9069
Worker	0.3507	0.2167	3.5218	9.4400e-003	1.0731	5.0300e-003	1.0781	0.2846	4.6300e-003	0.2892		965.9549	965.9549	0.0221	0.0225	973.2177
Total	**0.3958**	**1.5236**	**4.0599**	**0.0164**	**1.3293**	**0.0164**	**1.3457**	**0.3584**	**0.0155**	**0.3739**		**1,707.0389**	**1,707.0389**	**0.0296**	**0.1320**	**1,747.1246**

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	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**

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	0.0451	1.3068	0.5381	6.9900e-003	0.2562	0.0114	0.2676	0.0738	0.0109	0.0847		741.0840	741.0840	7.5600e-003	0.1095	773.9069
Worker	0.3507	0.2167	3.5218	9.4400e-003	1.0731	5.0300e-003	1.0781	0.2846	4.6300e-003	0.2892		965.9549	965.9549	0.0221	0.0225	973.2177
Total	**0.3958**	**1.5236**	**4.0599**	**0.0164**	**1.3293**	**0.0164**	**1.3457**	**0.3584**	**0.0155**	**0.3739**		**1,707.0389**	**1,707.0389**	**0.0296**	**0.1320**	**1,747.1246**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.5 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	0.7404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7732**	**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**

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	0.0548	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.0548**	**0.0339**	**0.5503**	**1.4700e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**150.9305**	**150.9305**	**3.4500e-003**	**3.5200e-003**	**152.0653**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.5 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	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	0.7404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7732**	**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**

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	0.0548	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.0548**	**0.0339**	**0.5503**	**1.4700e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**150.9305**	**150.9305**	**3.4500e-003**	**3.5200e-003**	**152.0653**

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

3.6 Architectural Coating - 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					
Archit. Coating	18.3682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**18.5598**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	0.0694	0.0429	0.6970	1.8700e-003	0.2124	1.0000e-003	0.2134	0.0563	9.2000e-004	0.0572		191.1786	191.1786	4.3700e-003	4.4600e-003	192.6160
Total	**0.0694**	**0.0429**	**0.6970**	**1.8700e-003**	**0.2124**	**1.0000e-003**	**0.2134**	**0.0563**	**9.2000e-004**	**0.0572**		**191.1786**	**191.1786**	**4.3700e-003**	**4.4600e-003**	**192.6160**

Mission Village Shopping Center - Riverside-South Coast County, Summer

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

3.6 Architectural Coating - 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	lb/day										lb/day					
Archit. Coating	18.3682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**18.5598**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	0.0694	0.0429	0.6970	1.8700e-003	0.2124	1.0000e-003	0.2134	0.0563	9.2000e-004	0.0572		191.1786	191.1786	4.3700e-003	4.4600e-003	192.6160
Total	**0.0694**	**0.0429**	**0.6970**	**1.8700e-003**	**0.2124**	**1.0000e-003**	**0.2134**	**0.0563**	**9.2000e-004**	**0.0572**		**191.1786**	**191.1786**	**4.3700e-003**	**4.4600e-003**	**192.6160**

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	lb/day										lb/day					
Mitigated	11.6011	11.0239	77.3337	0.1512	14.4611	0.1232	14.5843	3.8583	0.1153	3.9736		15,555.4634	15,555.4634	1.0127	0.8595	15,836.8966
Unmitigated	11.6011	11.0239	77.3337	0.1512	14.4611	0.1232	14.5843	3.8583	0.1153	3.9736		15,555.4634	15,555.4634	1.0127	0.8595	15,836.8966

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	409.12	409.12	409.12	756,723	756,723
Fast Food Restaurant with Drive Thru	705.60	705.60	705.60	874,243	874,243
Health Club	385.20	385.20	385.20	599,112	599,112
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	241.20	241.20	241.20	408,048	408,048
Strip Mall	1,764.95	1,764.95	1764.95	2,697,620	2,697,620
Supermarket	1,155.60	1,155.60	1155.60	1,507,726	1,507,726
Total	4,661.67	4,661.67	4,661.67	6,843,471	6,843,471

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
Automobile Care Center	16.60	3.00	6.90	33.00	48.00	19.00	49	51	0

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

	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
Fast Food Restaurant with Drive	16.60	3.00	6.90	2.20	78.80	19.00	79	21	0
Health Club	16.60	3.00	6.90	16.90	64.10	19.00	61	39	0
Parking Lot	16.60	3.00	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	3.00	6.90	12.00	69.00	19.00	82	18	0
Strip Mall	16.60	3.00	6.90	16.60	64.40	19.00	60	40	0
Supermarket	16.60	3.00	6.90	6.50	74.50	19.00	70	30	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Fast Food Restaurant with Drive Thru	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Health Club	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Parking Lot	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Quality Restaurant	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Strip Mall	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Supermarket	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Mission Village Shopping Center - Riverside-South Coast 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					
NaturalGas Mitigated	0.0620	0.5633	0.4732	3.3800e-003		0.0428	0.0428		0.0428	0.0428		675.9598	675.9598	0.0130	0.0124	679.9767
NaturalGas Unmitigated	0.0647	0.5881	0.4940	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.7006	705.7006	0.0135	0.0129	709.8943

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	lb/day										lb/day					
Automobile Care Center	338.801	3.6500e-003	0.0332	0.0279	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.8589	39.8589	7.6000e-004	7.3000e-004	40.0958
Fast Food Restaurant with Drive Thru	2166.34	0.0234	0.2124	0.1784	1.2700e-003		0.0161	0.0161		0.0161	0.0161		254.8635	254.8635	4.8800e-003	4.6700e-003	256.3780
Health Club	1594.36	0.0172	0.1563	0.1313	9.4000e-004		0.0119	0.0119		0.0119	0.0119		187.5713	187.5713	3.6000e-003	3.4400e-003	188.6860
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
Quality Restaurant	747.014	8.0600e-003	0.0732	0.0615	4.4000e-004		5.5700e-003	5.5700e-003		5.5700e-003	5.5700e-003		87.8840	87.8840	1.6800e-003	1.6100e-003	88.4062
Strip Mall	208.548	2.2500e-003	0.0205	0.0172	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.5351	24.5351	4.7000e-004	4.5000e-004	24.6809
Supermarket	943.397	0.0102	0.0925	0.0777	5.5000e-004		7.0300e-003	7.0300e-003		7.0300e-003	7.0300e-003		110.9879	110.9879	2.1300e-003	2.0300e-003	111.6475
Total		**0.0647**	**0.5881**	**0.4940**	**3.5200e-003**		**0.0447**	**0.0447**		**0.0447**	**0.0447**		**705.7006**	**705.7006**	**0.0135**	**0.0129**	**709.8943**

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					
Automobile Care Center	0.322872	3.4800e-003	0.0317	0.0266	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		37.9849	37.9849	7.3000e-004	7.0000e-004	38.2107
Fast Food Restaurant with Drive Thru	2.10525	0.0227	0.2064	0.1734	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.6764	247.6764	4.7500e-003	4.5400e-003	249.1482
Health Club	1.5194	0.0164	0.1490	0.1251	8.9000e-004		0.0113	0.0113		0.0113	0.0113		178.7526	178.7526	3.4300e-003	3.2800e-003	179.8149
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
Quality Restaurant	0.725948	7.8300e-003	0.0712	0.0598	4.3000e-004		5.4100e-003	5.4100e-003		5.4100e-003	5.4100e-003		85.4056	85.4056	1.6400e-003	1.5700e-003	85.9132
Strip Mall	0.190537	2.0500e-003	0.0187	0.0157	1.1000e-004		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003		22.4161	22.4161	4.3000e-004	4.1000e-004	22.5493
Supermarket	0.881655	9.5100e-003	0.0864	0.0726	5.2000e-004		6.5700e-003	6.5700e-003		6.5700e-003	6.5700e-003		103.7241	103.7241	1.9900e-003	1.9000e-003	104.3405
Total		**0.0620**	**0.5633**	**0.4732**	**3.3800e-003**		**0.0428**	**0.0428**		**0.0428**	**0.0428**		**675.9598**	**675.9598**	**0.0130**	**0.0124**	**679.9766**

6.0 Area Detail

6.1 Mitigation Measures Area

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	1.7189	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Unmitigated	1.7189	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134

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	0.1057					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6086					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6000e-003	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Total	**1.7189**	**4.5000e-004**	**0.0497**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1064**	**0.1064**	**2.8000e-004**		**0.1134**

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	0.1057					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6086					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6000e-003	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Total	**1.7189**	**4.5000e-004**	**0.0497**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1064**	**0.1064**	**2.8000e-004**		**0.1134**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

Institute Recycling and Composting Services

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

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

Mission Village Shopping Center

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	408.00	Space	6.50	163,200.00	0
Fast Food Restaurant with Drive Thru	2.90	1000sqft	0.07	2,900.00	0
Health Club	18.00	1000sqft	0.41	18,000.00	0
Quality Restaurant	1.00	1000sqft	0.02	1,000.00	0
Automobile Care Center	3.83	1000sqft	0.09	3,825.00	0
Strip Mall	34.60	1000sqft	0.79	34,600.00	0
Supermarket	18.00	1000sqft	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - PER SITE PLAN

Construction Phase - PER AQ CONSTRUCTION QUESTIONNAIRE

Off-road Equipment -

Off-road Equipment - as an conservative analysis

Off-road Equipment -

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

Trips and VMT - per cosntruction questionnaire

Demolition - per demolished building dimensions

Grading -

Architectural Coating - Rule 1113

Vehicle Trips - per traffic study. Trip gen includes pass-by trip and internal trip credits. Trip length adjusted to account for high density location setting.

Area Coating - Rule 1113

Water And Wastewater - Car wash water use: 12 gallons/car * 597 trips/day * 365 days/year

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - rule 1113

Energy Mitigation - per operation questionnaire

Water Mitigation - per operational questionnaire

Waste Mitigation - per oeprational questionnaire

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	230.00	196.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	20.00	23.00
tblGrading	MaterialExported	0.00	13,100.00
tblLandUse	LandUseSquareFeet	3,830.00	3,825.00
tblLandUse	LotAcreage	3.67	6.50
tblTripsAndVMT	HaulingTripLength	20.00	10.00

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

tblTripsAndVMT	HaulingTripLength	20.00	10.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	44.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	21.00	49.00
tblVehicleTrips	PR_TP	29.00	79.00
tblVehicleTrips	PR_TP	52.00	61.00
tblVehicleTrips	PR_TP	38.00	82.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	PR_TP	34.00	70.00
tblVehicleTrips	ST_TR	23.72	106.82
tblVehicleTrips	ST_TR	616.12	243.31
tblVehicleTrips	ST_TR	20.87	21.40
tblVehicleTrips	ST_TR	90.04	241.20
tblVehicleTrips	ST_TR	42.04	51.01
tblVehicleTrips	ST_TR	177.62	64.20
tblVehicleTrips	SU_TR	11.88	106.82
tblVehicleTrips	SU_TR	472.58	243.31
tblVehicleTrips	SU_TR	26.73	21.40

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

tblVehicleTrips	SU_TR	71.97	241.20
tblVehicleTrips	SU_TR	20.43	51.01
tblVehicleTrips	SU_TR	166.47	64.20
tblVehicleTrips	WD_TR	23.72	106.82
tblVehicleTrips	WD_TR	470.95	243.31
tblVehicleTrips	WD_TR	32.93	21.40
tblVehicleTrips	WD_TR	83.84	241.20
tblVehicleTrips	WD_TR	44.32	51.01
tblVehicleTrips	WD_TR	106.78	64.20
tblWater	OutdoorWaterUseRate	220,847.81	2,614,860.00

2.0 Emissions Summary

Mission Village Shopping Center - Riverside-South Coast 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					
2022	4.1778	40.4957	36.4189	0.0816	8.8221	1.7991	10.6212	3.8910	1.6737	5.5647	0.0000	8,042.8264	8,042.8264	1.5881	0.2703	8,163.0776
2023	20.5681	35.5495	35.4399	0.0807	8.8221	1.5070	10.3291	3.8910	1.4021	5.2931	0.0000	7,953.8246	7,953.8246	1.5807	0.2580	8,070.2288
Maximum	**20.5681**	**40.4957**	**36.4189**	**0.0816**	**8.8221**	**1.7991**	**10.6212**	**3.8910**	**1.6737**	**5.5647**	**0.0000**	**8,042.8264**	**8,042.8264**	**1.5881**	**0.2703**	**8,163.0776**

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					
2022	4.1778	40.4957	36.4189	0.0816	4.3478	1.7991	6.1469	1.7327	1.6737	3.4064	0.0000	8,042.8264	8,042.8264	1.5881	0.2703	8,163.0776
2023	20.5681	35.5495	35.4399	0.0807	4.3478	1.5070	5.8548	1.7327	1.4021	3.1348	0.0000	7,953.8246	7,953.8246	1.5807	0.2580	8,070.2288
Maximum	**20.5681**	**40.4957**	**36.4189**	**0.0816**	**4.3478**	**1.7991**	**6.1469**	**1.7327**	**1.6737**	**3.4064**	**0.0000**	**8,042.8264**	**8,042.8264**	**1.5881**	**0.2703**	**8,163.0776**

Mission Village Shopping Center - Riverside-South Coast 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	50.72	0.00	42.71	55.47	0.00	39.76	0.00	0.00	0.00	0.00	0.00	0.00

Mission Village Shopping Center - Riverside-South Coast 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	1.7189	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Energy	0.0647	0.5881	0.4940	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.7006	705.7006	0.0135	0.0129	709.8943
Mobile	9.4467	11.6772	71.5461	0.1407	14.4611	0.1234	14.5845	3.8583	0.1155	3.9738		14,484.3416	14,484.3416	1.0736	0.8790	14,773.1275
Total	**11.2303**	**12.2657**	**72.0897**	**0.1443**	**14.4611**	**0.1682**	**14.6294**	**3.8583**	**0.1603**	**4.0186**		**15,190.1487**	**15,190.1487**	**1.0875**	**0.8920**	**15,483.1352**

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	1.7189	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Energy	0.0620	0.5633	0.4732	3.3800e-003		0.0428	0.0428		0.0428	0.0428		675.9598	675.9598	0.0130	0.0124	679.9767
Mobile	9.4467	11.6772	71.5461	0.1407	14.4611	0.1234	14.5845	3.8583	0.1155	3.9738		14,484.3416	14,484.3416	1.0736	0.8790	14,773.1275
Total	**11.2276**	**12.2409**	**72.0689**	**0.1441**	**14.4611**	**0.1663**	**14.6275**	**3.8583**	**0.1585**	**4.0168**		**15,160.4078**	**15,160.4078**	**1.0869**	**0.8914**	**15,453.2176**

Mission Village Shopping Center - Riverside-South Coast 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	**0.02**	**0.20**	**0.03**	**0.10**	**0.00**	**1.12**	**0.01**	**0.00**	**1.17**	**0.05**	**0.00**	**0.20**	**0.20**	**0.05**	**0.06**	**0.19**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2022	11/28/2022	5	20	
2	Grading	Grading	11/29/2022	2/28/2023	5	66	
3	Building Construction	Building Construction	12/1/2022	8/31/2023	5	196	
4	Paving	Paving	3/1/2023	3/31/2023	5	23	
5	Architectural Coating	Architectural Coating	7/1/2023	7/31/2023	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 66

Acres of Paving: 6.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 117,488; Non-Residential Outdoor: 39,163; Striped Parking Area: 9,792 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	15.00	0.00	60.00	14.70	6.90	10.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,638.00	14.70	6.90	10.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	96.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.2 Demolition - 2022

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					
Fugitive Dust					0.6537	0.0000	0.6537	0.0990	0.0000	0.0990			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**0.6537**	**1.2427**	**1.8963**	**0.0990**	**1.1553**	**1.2542**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	6.2800e-003	0.2356	0.0708	9.1000e-004	0.0263	2.2500e-003	0.0285	7.2100e-003	2.1600e-003	9.3700e-003		97.2679	97.2679	1.3200e-003	0.0153	101.8668
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	0.0552	0.0398	0.4846	1.3800e-003	0.1677	8.4000e-004	0.1685	0.0445	7.7000e-004	0.0452		140.4261	140.4261	3.8100e-003	3.9000e-003	141.6847
Total	**0.0615**	**0.2753**	**0.5554**	**2.2900e-003**	**0.1940**	**3.0900e-003**	**0.1970**	**0.0517**	**2.9300e-003**	**0.0546**		**237.6939**	**237.6939**	**5.1300e-003**	**0.0192**	**243.5514**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.2 Demolition - 2022

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					
Fugitive Dust					0.2422	0.0000	0.2422	0.0367	0.0000	0.0367			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**0.2422**	**1.2427**	**1.4848**	**0.0367**	**1.1553**	**1.1919**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	6.2800e-003	0.2356	0.0708	9.1000e-004	0.0263	2.2500e-003	0.0285	7.2100e-003	2.1600e-003	9.3700e-003		97.2679	97.2679	1.3200e-003	0.0153	101.8668
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	0.0552	0.0398	0.4846	1.3800e-003	0.1677	8.4000e-004	0.1685	0.0445	7.7000e-004	0.0452		140.4261	140.4261	3.8100e-003	3.9000e-003	141.6847
Total	**0.0615**	**0.2753**	**0.5554**	**2.2900e-003**	**0.1940**	**3.0900e-003**	**0.1970**	**0.0517**	**2.9300e-003**	**0.0546**		**237.6939**	**237.6939**	**5.1300e-003**	**0.0192**	**243.5514**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.3 Grading - 2022

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					
Fugitive Dust					7.1077	0.0000	7.1077	3.4285	0.0000	3.4285			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.1077**	**0.9409**	**8.0486**	**3.4285**	**0.8656**	**4.2941**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0520	1.9488	0.5858	7.5400e-003	0.2175	0.0186	0.2361	0.0596	0.0178	0.0775		804.6704	804.6704	0.0110	0.1268	842.7159
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	0.0552	0.0398	0.4846	1.3800e-003	0.1677	8.4000e-004	0.1685	0.0445	7.7000e-004	0.0452		140.4261	140.4261	3.8100e-003	3.9000e-003	141.6847
Total	**0.1072**	**1.9885**	**1.0704**	**8.9200e-003**	**0.3851**	**0.0195**	**0.4046**	**0.1041**	**0.0186**	**0.1227**		**945.0965**	**945.0965**	**0.0148**	**0.1307**	**984.4005**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.3 Grading - 2022

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					
Fugitive Dust					2.6334	0.0000	2.6334	1.2703	0.0000	1.2703			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**2.6334**	**0.9409**	**3.5743**	**1.2703**	**0.8656**	**2.1359**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0520	1.9488	0.5858	7.5400e-003	0.2175	0.0186	0.2361	0.0596	0.0178	0.0775		804.6704	804.6704	0.0110	0.1268	842.7159
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	0.0552	0.0398	0.4846	1.3800e-003	0.1677	8.4000e-004	0.1685	0.0445	7.7000e-004	0.0452		140.4261	140.4261	3.8100e-003	3.9000e-003	141.6847
Total	**0.1072**	**1.9885**	**1.0704**	**8.9200e-003**	**0.3851**	**0.0195**	**0.4046**	**0.1041**	**0.0186**	**0.1227**		**945.0965**	**945.0965**	**0.0148**	**0.1307**	**984.4005**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.3 Grading - 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					
Fugitive Dust					7.1077	0.0000	7.1077	3.4285	0.0000	3.4285			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.1077**	**0.7749**	**7.8826**	**3.4285**	**0.7129**	**4.1415**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.0393	1.5828	0.5824	7.2200e-003	0.2175	0.0151	0.2326	0.0596	0.0145	0.0741		771.0021	771.0021	0.0110	0.1215	807.4776
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	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.0907**	**1.6180**	**1.0293**	**8.5600e-003**	**0.3851**	**0.0159**	**0.4010**	**0.1041**	**0.0152**	**0.1193**		**907.7586**	**907.7586**	**0.0144**	**0.1251**	**945.3933**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					2.6334	0.0000	2.6334	1.2703	0.0000	1.2703			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.6334**	**0.7749**	**3.4083**	**1.2703**	**0.7129**	**1.9832**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.0393	1.5828	0.5824	7.2200e-003	0.2175	0.0151	0.2326	0.0596	0.0145	0.0741		771.0021	771.0021	0.0110	0.1215	807.4776
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	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.0907**	**1.6180**	**1.0293**	**8.5600e-003**	**0.3851**	**0.0159**	**0.4010**	**0.1041**	**0.0152**	**0.1193**		**907.7586**	**907.7586**	**0.0144**	**0.1251**	**945.3933**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.4 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0623	1.7820	0.6107	7.2900e-003	0.2562	0.0245	0.2807	0.0738	0.0234	0.0972		772.6231	772.6231	8.0400e-003	0.1147	806.9948
Worker	0.3534	0.2545	3.1016	8.8300e-003	1.0731	5.3500e-003	1.0784	0.2846	4.9200e-003	0.2895		898.7269	898.7269	0.0244	0.0250	906.7818
Total	**0.4157**	**2.0365**	**3.7123**	**0.0161**	**1.3293**	**0.0298**	**1.3591**	**0.3584**	**0.0283**	**0.3867**		**1,671.3499**	**1,671.3499**	**0.0325**	**0.1397**	**1,713.7765**

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

3.4 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0623	1.7820	0.6107	7.2900e-003	0.2562	0.0245	0.2807	0.0738	0.0234	0.0972		772.6231	772.6231	8.0400e-003	0.1147	806.9948
Worker	0.3534	0.2545	3.1016	8.8300e-003	1.0731	5.3500e-003	1.0784	0.2846	4.9200e-003	0.2895		898.7269	898.7269	0.0244	0.0250	906.7818
Total	**0.4157**	**2.0365**	**3.7123**	**0.0161**	**1.3293**	**0.0298**	**1.3591**	**0.3584**	**0.0283**	**0.3867**		**1,671.3499**	**1,671.3499**	**0.0325**	**0.1397**	**1,713.7765**

Mission Village Shopping Center - Riverside-South Coast 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 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**

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	0.0418	1.3859	0.5562	7.0100e-003	0.2562	0.0114	0.2676	0.0738	0.0109	0.0847		742.9232	742.9232	7.4100e-003	0.1099	775.8511
Worker	0.3287	0.2249	2.8598	8.5500e-003	1.0731	5.0300e-003	1.0781	0.2846	4.6300e-003	0.2892		875.2419	875.2419	0.0220	0.0231	882.6603
Total	**0.3705**	**1.6108**	**3.4160**	**0.0156**	**1.3293**	**0.0165**	**1.3457**	**0.3584**	**0.0156**	**0.3739**		**1,618.1651**	**1,618.1651**	**0.0294**	**0.1329**	**1,658.5113**

Mission Village Shopping Center - Riverside-South Coast 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 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**

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	0.0418	1.3859	0.5562	7.0100e-003	0.2562	0.0114	0.2676	0.0738	0.0109	0.0847		742.9232	742.9232	7.4100e-003	0.1099	775.8511
Worker	0.3287	0.2249	2.8598	8.5500e-003	1.0731	5.0300e-003	1.0781	0.2846	4.6300e-003	0.2892		875.2419	875.2419	0.0220	0.0231	882.6603
Total	**0.3705**	**1.6108**	**3.4160**	**0.0156**	**1.3293**	**0.0165**	**1.3457**	**0.3584**	**0.0156**	**0.3739**		**1,618.1651**	**1,618.1651**	**0.0294**	**0.1329**	**1,658.5113**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.5 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	0.7404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7732**	**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**

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	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.0514**	**0.0351**	**0.4468**	**1.3400e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**136.7566**	**136.7566**	**3.4300e-003**	**3.6000e-003**	**137.9157**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.5 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	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	0.7404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7732**	**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**

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	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.0514**	**0.0351**	**0.4468**	**1.3400e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**136.7566**	**136.7566**	**3.4300e-003**	**3.6000e-003**	**137.9157**

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

3.6 Architectural Coating - 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					
Archit. Coating	18.3682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**18.5598**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	0.0651	0.0445	0.5660	1.6900e-003	0.2124	1.0000e-003	0.2134	0.0563	9.2000e-004	0.0572		173.2250	173.2250	4.3500e-003	4.5600e-003	174.6932
Total	**0.0651**	**0.0445**	**0.5660**	**1.6900e-003**	**0.2124**	**1.0000e-003**	**0.2134**	**0.0563**	**9.2000e-004**	**0.0572**		**173.2250**	**173.2250**	**4.3500e-003**	**4.5600e-003**	**174.6932**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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

3.6 Architectural Coating - 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	lb/day										lb/day					
Archit. Coating	18.3682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**18.5598**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	0.0651	0.0445	0.5660	1.6900e-003	0.2124	1.0000e-003	0.2134	0.0563	9.2000e-004	0.0572		173.2250	173.2250	4.3500e-003	4.5600e-003	174.6932
Total	**0.0651**	**0.0445**	**0.5660**	**1.6900e-003**	**0.2124**	**1.0000e-003**	**0.2134**	**0.0563**	**9.2000e-004**	**0.0572**		**173.2250**	**173.2250**	**4.3500e-003**	**4.5600e-003**	**174.6932**

Mission Village Shopping Center - Riverside-South Coast County, Winter

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	lb/day										lb/day					
Mitigated	9.4467	11.6772	71.5461	0.1407	14.4611	0.1234	14.5845	3.8583	0.1155	3.9738		14,484.3416	14,484.3416	1.0736	0.8790	14,773.1275
Unmitigated	9.4467	11.6772	71.5461	0.1407	14.4611	0.1234	14.5845	3.8583	0.1155	3.9738		14,484.3416	14,484.3416	1.0736	0.8790	14,773.1275

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	409.12	409.12	409.12	756,723	756,723
Fast Food Restaurant with Drive Thru	705.60	705.60	705.60	874,243	874,243
Health Club	385.20	385.20	385.20	599,112	599,112
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	241.20	241.20	241.20	408,048	408,048
Strip Mall	1,764.95	1,764.95	1764.95	2,697,620	2,697,620
Supermarket	1,155.60	1,155.60	1155.60	1,507,726	1,507,726
Total	4,661.67	4,661.67	4,661.67	6,843,471	6,843,471

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
Automobile Care Center	16.60	3.00	6.90	33.00	48.00	19.00	49	51	0

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

	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
Fast Food Restaurant with Drive	16.60	3.00	6.90	2.20	78.80	19.00	79	21	0
Health Club	16.60	3.00	6.90	16.90	64.10	19.00	61	39	0
Parking Lot	16.60	3.00	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	3.00	6.90	12.00	69.00	19.00	82	18	0
Strip Mall	16.60	3.00	6.90	16.60	64.40	19.00	60	40	0
Supermarket	16.60	3.00	6.90	6.50	74.50	19.00	70	30	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Fast Food Restaurant with Drive Thru	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Health Club	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Parking Lot	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Quality Restaurant	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Strip Mall	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Supermarket	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Mission Village Shopping Center - Riverside-South Coast 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					
NaturalGas Mitigated	0.0620	0.5633	0.4732	3.3800e-003		0.0428	0.0428		0.0428	0.0428		675.9598	675.9598	0.0130	0.0124	679.9767
NaturalGas Unmitigated	0.0647	0.5881	0.4940	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.7006	705.7006	0.0135	0.0129	709.8943

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	lb/day										lb/day					
Automobile Care Center	338.801	3.6500e-003	0.0332	0.0279	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.8589	39.8589	7.6000e-004	7.3000e-004	40.0958
Fast Food Restaurant with Drive Thru	2166.34	0.0234	0.2124	0.1784	1.2700e-003		0.0161	0.0161		0.0161	0.0161		254.8635	254.8635	4.8800e-003	4.6700e-003	256.3780
Health Club	1594.36	0.0172	0.1563	0.1313	9.4000e-004		0.0119	0.0119		0.0119	0.0119		187.5713	187.5713	3.6000e-003	3.4400e-003	188.6860
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
Quality Restaurant	747.014	8.0600e-003	0.0732	0.0615	4.4000e-004		5.5700e-003	5.5700e-003		5.5700e-003	5.5700e-003		87.8840	87.8840	1.6800e-003	1.6100e-003	88.4062
Strip Mall	208.548	2.2500e-003	0.0205	0.0172	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003		24.5351	24.5351	4.7000e-004	4.5000e-004	24.6809
Supermarket	943.397	0.0102	0.0925	0.0777	5.5000e-004		7.0300e-003	7.0300e-003		7.0300e-003	7.0300e-003		110.9879	110.9879	2.1300e-003	2.0300e-003	111.6475
Total		**0.0647**	**0.5881**	**0.4940**	**3.5200e-003**		**0.0447**	**0.0447**		**0.0447**	**0.0447**		**705.7006**	**705.7006**	**0.0135**	**0.0129**	**709.8943**

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					
Automobile Care Center	0.322872	3.4800e-003	0.0317	0.0266	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		37.9849	37.9849	7.3000e-004	7.0000e-004	38.2107
Fast Food Restaurant with Drive Thru	2.10525	0.0227	0.2064	0.1734	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.6764	247.6764	4.7500e-003	4.5400e-003	249.1482
Health Club	1.5194	0.0164	0.1490	0.1251	8.9000e-004		0.0113	0.0113		0.0113	0.0113		178.7526	178.7526	3.4300e-003	3.2800e-003	179.8149
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
Quality Restaurant	0.725948	7.8300e-003	0.0712	0.0598	4.3000e-004		5.4100e-003	5.4100e-003		5.4100e-003	5.4100e-003		85.4056	85.4056	1.6400e-003	1.5700e-003	85.9132
Strip Mall	0.190537	2.0500e-003	0.0187	0.0157	1.1000e-004		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003		22.4161	22.4161	4.3000e-004	4.1000e-004	22.5493
Supermarket	0.881655	9.5100e-003	0.0864	0.0726	5.2000e-004		6.5700e-003	6.5700e-003		6.5700e-003	6.5700e-003		103.7241	103.7241	1.9900e-003	1.9000e-003	104.3405
Total		**0.0620**	**0.5633**	**0.4732**	**3.3800e-003**		**0.0428**	**0.0428**		**0.0428**	**0.0428**		**675.9598**	**675.9598**	**0.0130**	**0.0124**	**679.9766**

6.0 Area Detail

6.1 Mitigation Measures Area

Mission Village Shopping Center - Riverside-South Coast 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	1.7189	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Unmitigated	1.7189	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134

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	0.1057					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6086					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6000e-003	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Total	**1.7189**	**4.5000e-004**	**0.0497**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1064**	**0.1064**	**2.8000e-004**		**0.1134**

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	0.1057					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6086					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6000e-003	4.5000e-004	0.0497	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1064	0.1064	2.8000e-004		0.1134
Total	**1.7189**	**4.5000e-004**	**0.0497**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1064**	**0.1064**	**2.8000e-004**		**0.1134**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

Institute Recycling and Composting Services

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