



Technical Memorandum

To: Rick Bondar, Vernola Trust

From: Eliza Laws, Senior Environmental Analyst
Noemi Avila, Assistant Environmental Analyst

Date: February 18, 2022

Re: Air Quality/Greenhouse Gas (GHG)/Energy Analysis for the Vernola Marketplace
Apartment Community (VMAC) Phase B in the City of Jurupa Valley, MA21347

The following air quality assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of construction and operation of the proposed Project would cause exceedances of the South Coast Air Quality Management District's (SCAQMD) thresholds for air quality in the Project area. The greenhouse gas (GHG) assessment was prepared to evaluate whether the expected criteria GHG emissions generated as a result of the proposed Project would exceed the City's screening significance threshold. The energy assessment was prepared to evaluate whether the Project would result in wasteful, inefficient, or unnecessary consumption of energy resources. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 *et seq.*). The methodology follows the *CEQA Air Quality Handbook* prepared by the SCAQMD for quantification of emissions and evaluation of potential impacts to air resources. As recommended by SCAQMD staff, the **California Emissions Estimator Model**[®] version 2020.4.0 (CalEEMod) was used to quantify Project-related emissions.

The SCAQMD is responsible for bringing the air quality in the areas of its jurisdiction into conformity with the federal and state air quality standards and develops and updates clean air plans, such as the regional Air Quality Management Plan (AQMP), which contain guidelines intended to support efforts to develop rules and regulations, establish permitting requirements, inspect emission sources, and enforce such measures through educational programs or fines, when necessary.

The proposed Project is located within the South Coast Air Basin (the Basin), which is under the jurisdiction of the SCAQMD. The Basin consists of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. Regional and local air quality within the Basin is affected by topography, atmospheric inversions, and dominant onshore flows. Topographic features such as the San Gabriel, San Bernardino, and San Jacinto Mountains form natural horizontal barriers to the dispersion of air contaminants.

The proposed Project is a development plan to construct Phase B of the Vernola Marketplace Apartment Community (VMAC), which consists of 208 apartments and related site improvements including open and covered vehicle parking, landscaping, outdoor recreation areas, swimming pool, a clubhouse and fitness center, walkways, drainage, water, sewer, electricity and natural gas facilities, lighting, etc. Off-site water and sewer line extensions will be required. The Project site encompasses 8.34 acres of vacant land located at the west of the corner of Pats Ranch Road and 65th Street, in the City of Jurupa Valley, in western Riverside County, California. The Interstate 15 (I-15) freeway borders the west side of the Project site.

▪ Regional Significance Thresholds

The thresholds contained in the *SCAQMD CEQA Air Quality Handbook*¹ (SCAQMD 1993) and posted in a supplemental table as mass daily thresholds on SCAQMD's website² are considered regional thresholds and are shown in **Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds**, below. These regional thresholds were developed for criteria pollutants based on the SCAQMD's treatment of a major stationary source.

The criteria pollutants analyzed are briefly described below:

- **Reactive Organic Gases/Volatile Organic Compounds (ROG/VOC)** - It should be noted that there are no state or federal ambient air quality standards for VOCs because they are not classified as criteria pollutants. VOCs are regulated; however, a reduction in VOC emissions reduces certain chemical reactions, which contribute to the formation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM-10 and lower visibility levels. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOC because of interference with oxygen uptake. In general, ambient VOC concentrations in the atmosphere, even at low concentrations, are suspected to cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis. Some hydrocarbon components classified as VOC emissions are thought or known to be hazardous. Benzene, for example, is a hydrocarbon component of VOC emissions that is known to be a human carcinogen.³
- **Oxides of Nitrogen (NO_x)** – Those that are important in air pollution are nitric oxide (NO) and nitrogen dioxide (NO₂). NO is a colorless, odorless gas formed by a combination of nitrogen and oxygen when combustion takes place under high temperatures and pressures. NO₂ is a reddish-brown gas formed by the combination of NO with oxygen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations, as well as ships, railroads, and aircraft are the primary sources of NO_x. NO₂ at atmospheric concentrations is a potential irritant that can cause coughing in healthy people; can alter respiratory responsiveness and pulmonary functions in people with preexisting respiratory illness; and potentially lead to increased levels of respiratory illness in children.⁴
- **Carbon Monoxide (CO)** – A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing substances. Concentrations of CO are generally higher during the winter months when meteorological conditions favor the build-up of primary pollutants.⁵ Automobiles are the major source of CO in the Basin, although various industrial processes also emit CO through incomplete combustion of fuels. In high concentrations, CO can cause serious health problems in humans by limiting the red blood cells' ability to carry oxygen.⁶
- **Sulfur dioxide (SO₂)/oxides of sulfur (SO_x)** – A colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. SO₂ can result in temporary breathing impairment in asthmatic children and adults engaged in active outdoor activities. When combined with particulate matter, SO₂ can cause symptoms such as shortness of breath and wheezing; and, with long-term exposure, it can lead to the exacerbation of existing cardiovascular disease and respiratory illnesses. Although SO₂ concentrations have been reduced to levels well below state

¹ South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)

² <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

³ South Coast Air Quality Management District, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, May 6, 2005. (Available at <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>, accessed February 2022.)

⁴ U.S. Environmental Protection Agency, *Criteria Air Pollutants*. (Available at <https://www.epa.gov/criteria-air-pollutants>, accessed February 2022.)

⁵ *Ibid.*

⁶ South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)

and federal standards, further reductions in SO₂ emissions are needed because SO₂ is a precursor to sulfate and particulate matter less than 10 microns in diameter.⁷

- **Atmospheric Particulate Matter (PM-10, PM-2.5)** – Made up of fine solid and liquid particles, such as soot, dust, aerosols, fumes, and mists. PM-10 consists of particulate matter that is 10 microns or less in diameter, and PM-2.5 consists of particulate matter of 2.5 microns or less in size. Both PM-10 and PM-2.5 can be inhaled into the deepest part of the lung, attributing to health effects. The presence of these fine particles by themselves cause lung damage and interfere with the body’s ability to clear its respiratory tract. Said particles can also act as a carrier of other toxic substances.⁸

Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds

Emission Threshold	Units	VOC	NO _x	CO	SO _x	PM-10	PM-2.5
Construction	lbs/day	75	100	550	150	150	55
Operation	lbs/day	55	55	550	150	150	55

Air quality impacts can be described in a short- and long-term perspective. Short-term impacts occur during site grading and Project construction and consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Long-term air quality impacts occur once the Project is in operation.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, including but not limited to application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 or more acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of this Project’s disturbance area (approximately 8.74 acres), a Fugitive Dust Control Plan or a Large Operation Notification Form will not be required.

Short-Term Analysis

Short-term emissions from Project construction were evaluated using the CalEEMod version 2020.4.0 program. The estimated construction period for the proposed Project is approximately 25 months, beginning no sooner than September 2022. The default parameters within CalEEMod were used and these default values reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions. In addition to the default values used, assumptions relevant to model inputs for short-term construction emission estimates used are:

- Construction is anticipated to begin no earlier than September 2022. Beginning with Grading and ending with Building Construction and Architectural Coating:

⁷ U.S. Environmental Protection Agency, *Criteria Air Pollutants*. (Available at <https://www.epa.gov/criteria-air-pollutants>, accessed February 2022.)

⁸ South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)

Construction Activity	Start Date	End Date	Total Working Days
Grading	September 1, 2022	September 30, 2022	22
Building Construction	October 1, 2022	September 30, 2024	521
Paving	October 1, 2022	October 28, 2022	20
Architectural Coatings	December 1, 2022	September 30, 2024	478

- The entire 8.34-acre Project site will be mass graded, and an additional 0.40 acres will be disturbed for the construction off-site improvements, which include an extension of water and sewer lines from the existing facilities in the intersection of Pats Ranch Road and 65th Street to the Project site and repaving of the roadway within this area.
- Approximately 49,000 cubic yards of soil will be exported during grading operations. Based on the CalEEMod default truck capacity of 16 cubic yards, this results in approximately 3,063 truckloads of soil export over a 22-day period, or approximately 139 truckloads per day. The soil will be exported to unimproved land at the northwest corner of Pats Ranch Road and Limonite Avenue; the estimated haul truck trip length is approximately 0.80 miles per trip.
- The off-road equipment to be used for each activity is shown below and represents program defaults, updated by Project-specific information provided by the applicant. Each piece of equipment is assumed to operate 8 hours per day:

Construction Activity	Off-Road Equipment	Phase 1 Unit Amount
Grading	Excavators	1
	Graders	1
	Rubber Tired Dozers	1
	Tractors/Loaders/Backhoes	3
Building Construction	Cranes	1
	Forklifts	3
	Tractors/Loaders/Backhoes	3
	Welders	1
	Generator Sets	3
Paving	Pavers	2
	Paving Equipment	2
	Rollers	2
Architectural Coatings	Air Compressors	2

- To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the Project utilized the mitigation option of watering the Project site three times daily which achieves a control efficiency of 61 percent for PM-10 and PM-2.5 emissions. Two (2) one-way vendor trips per day were added to the grading and paving activity to account for water truck trips.

The results of this analysis are summarized below.

Table 2 – Estimated Unmitigated Maximum Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)					
	VOC	NO _x	CO	SO ₂	PM-10	PM-2.5
SCAQMD Daily Construction Thresholds	75	100	550	150	150	55
Grading – 2022	2.40	28.45	20.93	0.05	4.22	2.34
Building Construction – 2022	3.62	26.31	36.29	0.08	4.59	2.06
Building Construction – 2023	3.32	23.81	35.21	0.08	4.42	1.90
Building Construction – 2024	3.11	22.39	34.47	0.08	4.29	1.77
Paving – 2022	1.69	11.25	15.21	0.02	0.75	0.57
Architectural Coatings – 2022	5.03	3.90	6.95	0.01	0.81	0.38
Architectural Coatings – 2023	4.98	3.60	6.77	0.01	0.78	0.35
Architectural Coatings – 2024	4.94	3.36	6.64	0.01	0.76	0.32
Maximum¹	8.65	37.56	51.49	0.11	5.41	2.64
Exceeds Threshold?	No	No	No	No	No	No

Note: ¹ Maximum emissions are the greater of either; 1) grading alone; 2) the sum of building construction and paving in 2022; 3) the sum of building construction and architectural coating in 2022; 4) the sum of building construction and architectural coating in 2023; or 5) the sum of building construction and architectural coating in 2024 because these activities overlap. Maximum emissions are rounded and shown in bold.

As shown in the table above, the emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants.

Long-Term Analysis

Long-term emissions are evaluated at build-out of a project. The Project is assumed to be fully operational in 2024. Mobile source emissions refer to on-road motor vehicle emissions generated from the Project’s traffic and based on the Project-specific Traffic Impact Analysis (TIA).⁹

Area source emissions from the Project include stationary combustion emissions of natural gas used for space and water heating (shown in a separate row as energy), yard and landscape maintenance, consumer use of solvents and personal care products, and an average building square footage to be repainted each year. CalEEMod computes area source emissions based upon default factors and land use assumptions. CalEEMod contains the 2019 Title 24 energy efficiency standards. CalEEMod defaults were utilized except for fireplaces, which were assumed to be absent from the Project. Separate emissions were computed for both the summer and winter.

Table 3 – Estimated Unmitigated Daily Project Operation Emissions (Summer)

Source	Peak Daily Emissions (lb/day)					
	VOC	NO _x	CO	SO ₂	PM-10	PM-2.5
SCAQMD Daily Thresholds	55	55	550	150	150	55
Area	7.40	0.20	17.18	0.00	0.10	0.10
Energy	0.09	0.79	0.34	0.01	0.06	0.06
Mobile	5.27	6.89	51.72	0.12	12.32	3.35
Total	12.76	7.88	69.24	0.13	12.48	3.51
Exceeds Threshold?	No	No	No	No	No	No

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

⁹ Albert A Webb Associates, *Vernola Marketplace Apartment Community Traffic Impact Analysis*, September 2021.

Table 4 – Estimated Unmitigated Daily Project Operation Emissions (Winter)

Source	Peak Daily Emissions (lb/day) ¹					
	VOC	NO _x	CO	SO ₂	PM-10	PM-2.5
SCAQMD Daily Thresholds	55	55	550	150	150	55
Area	7.40	0.20	17.18	0.00	0.10	0.10
Energy	0.09	0.79	0.34	0.01	0.06	0.06
Mobile	4.49	7.31	45.69	0.11	12.32	3.35
Total	11.98	8.30	63.21	0.12	12.48	3.51
Exceeds Threshold?	No	No	No	No	No	No

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

Evaluation of the data presented on the above tables indicates that criteria pollutant emissions from operation of this Project will not exceed the SCAQMD regional daily thresholds during summer or winter.

▪ Localized Significance Threshold Analysis

Background

As part of the SCAQMD’s environmental justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold (LST) methodology¹⁰ that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short- and long-term) to sensitive receptors. SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The Project site is located within SRA 23.

Short-Term Analysis

According to the LST methodology, only on-site emissions need to be analyzed. Emissions associated with vendor and worker trips are mobile source emissions that occur off site. The emissions analyzed under the LST methodology are NO₂, CO, PM-10, and PM-2.5. SCAQMD has provided LST lookup tables¹¹ to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. The LST methodology and tables can be used as a screening tool to determine if dispersion modeling would be necessary.

The SCAQMD’s Fact Sheet for Applying CalEEMod to Localized Significance Thresholds is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.¹² Based on this SCAQMD guidance and the Project’s equipment list during grading (above), the Project will disturb approximately three acres per day during grading. Therefore, to be conservative, the LST for the two-acre site was used.

The LST are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). The closest sensitive receptors are existing residential properties located across Pats Ranch Road to the east boundary of the Project site and the planned residences south of the Project site that are currently under construction. The closest receptor distance on the LST look-up tables is 25 meters. According to LST methodology, projects with boundaries closer

¹⁰ South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, Revised July 2008. (Available at <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>, accessed February 2022.)

¹¹ *Ibid.*

¹² <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2>

than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. Therefore, a receptor distance of 25 meters (85 feet) was used to ensure a conservative analysis. The results are summarized below.

Table 5 –LST Results for Unmitigated Daily Construction Emissions

Pollutant	Peak Daily Emissions (lb/day)			
	NO _x	CO	PM-10	PM-2.5
LST for 2-acres at 25 meters	170	883	7	4
Grading – 2022	20.86	15.27	3.81	2.22
Building Construction – 2022	22.62	24.79	1.16	1.11
Building Construction – 2023	20.87	24.65	1.00	0.96
Building Construction – 2024	19.51	24.55	0.88	0.84
Paving – 2022	11.12	14.58	0.57	0.52
Architectural Coating – 2022	3.76	4.84	0.22	0.22
Architectural Coating – 2023	3.47	4.83	0.19	0.19
Architectural Coating – 2024	3.25	4.83	0.16	0.16
Maximum²	33.75	39.37	3.81	2.22
Exceeds Threshold?	No	No	No	No

Note: ¹ Maximum emissions for are the greater of either; 1) grading alone; 2) the sum of building construction and paving in 2022; 3) the sum of building construction and architectural coating in 2022; 4) the sum of building construction and architectural coating in 2023; or 5) the sum of building construction and architectural coating in 2024 because these activities overlap. Maximum emissions are rounded and shown in bold.

Emissions from construction of the Project will be below the LST established by SCAQMD for the Project.

Long-Term Analysis

This Project involves the construction of a residential development. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site, such as warehouse/transfer facilities. The proposed Project does not include such uses. Therefore, due to the lack of stationary source emissions or on-site mobile equipment, no long-term LST analysis is needed.

CO Hot Spots Analysis

A carbon monoxide (CO) “hot spot” is a localized concentration of CO that is above the state or federal 1-hour or 8-hour ambient air quality standards (AAQS). Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles.

Based on the information presented below, a CO “hot spot” analysis is not needed to determine whether the addition of Project related traffic will contribute to an exceedance of either the state or federal AAQS for CO emissions in the Project area.

The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD’s 2003 Air Quality Management Plan (2003 AQMP)¹³ and the Revised 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan).¹⁴ As discussed in the

¹³ SCAQMD, *2003 Air Quality Management Plan, August 1, 2003*. (Available at <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp>, accessed February 2022.)

¹⁴ SCAQMD, *Revision to the 1992 Carbon Monoxide Attainment Plan, September 1994*. (Available at SCAQMD.)

1992 CO Plan, peak carbon monoxide concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections (2003 AQMP Appendix V, p. V-4-32). Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of the 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Blvd. and Imperial Highway (Lynwood); Wilshire Blvd. and Veteran Ave. (Westwood); Sunset Blvd. and Highland Ave. (Hollywood); and La Cienega Blvd. and Century Blvd. (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated in the 1992 CO Plan and subsequent 2003 AQMP was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day (2003 AQMP Appendix V, Table 4-7). The Los Angeles County Metropolitan Transportation Authority (MTA)¹⁵ evaluated the Level of Service (LOS) in the vicinity of the Wilshire Blvd./Veteran Ave. intersection and found it to be level E at peak morning traffic and Level F at peak afternoon traffic (MTA, Exhibit 2-5 and 2-6). The hot spot analysis was conducted at intersections subject to extremes in vehicle volumes and vehicle congestion, and did not predict any violation of CO standards. Considering Project-related traffic in the General Plan horizon year of 2035, the highest average daily trips would be approximately 49,110 at the intersection of Limonite Avenue and Pats Ranch Road, which is lower than the values studied by SCAQMD.¹⁶ Therefore, it can reasonably be concluded that Project-related traffic would not have daily traffic volumes exceeding those at the intersections modeled in the 2003 AQMP, nor would there be any reason unique to the meteorology to conclude that intersections affected by the Project would yield higher CO concentrations if modeled in detail. Thus, the Project would not result in CO hot spots.

■ Greenhouse Gas Analysis

Greenhouse gases (GHG) are not presented in lbs/day like criteria pollutants; they are typically evaluated on an annual basis using the metric system. Additionally, unlike criteria pollutants, GHG do not have adopted significance thresholds associated with them at this time. Several agencies, at various levels, have proposed draft GHG significance thresholds for use in CEQA documents. SCAQMD worked on GHG thresholds for development projects. In December 2008, the SCAQMD adopted a threshold of 10,000 metric tonnes per year of carbon dioxide equivalents (MTCO₂E/yr) for stationary source projects where SCAQMD is the lead agency. The most recent draft proposal was in September 2010¹⁷ and included significance thresholds for residential, commercial, and mixed-use projects at 3,500, 1,400, and 3,000 MTCO₂E/yr, respectively. Alternatively, a lead agency has the option to use 3,000 MTCO₂E/yr as a threshold for all non-industrial projects. Although both options are recommended by SCAQMD, a lead agency is advised to use only one option and to use it consistently. The SCAQMD significance thresholds also evaluate construction emissions by amortizing them over an expected project life of 30 years.

A final numerical threshold for determining the significance of GHG emissions has not been established by SCAQMD for project where they are not the lead agency. City of Jurupa Valley General Plan Policy AQ 9.5 requires the City to utilize the SCAQMD Draft GHG thresholds to evaluate development proposals until the City adopts a Climate Action Plan (CAP). The City has determined that the SCAQMD's draft threshold of 3,000 MTCO₂E per year is appropriate for land use development projects. The following analysis summarizes the CalEEMod output results for Project-related GHG emissions and

¹⁵ Metropolitan Transportation Authority, *2004 Congestion Management Plan for Los Angeles County*, Adopted July 22, 2004. (Available at <http://libraryarchives.metro.net/congestion-management-program-lacmta/2004-congestion-management-program.pdf>, accessed February 2022.)

¹⁶ Albert A. Webb Associates; *Vernola Marketplace Apartment Community Traffic Impact Analysis*, September 2021.

¹⁷ [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2)

presents the GHG emissions estimates for the Project for CO₂, methane (CH₄), nitrous oxide (N₂O), and CO₂E.¹⁸

Short-Term Analysis

Construction-Related Emissions

The CalEEMod model calculates GHG emissions from fuel usage by construction equipment and construction-related activities, like construction worker trips, for the Project. The CalEEMod estimate does not analyze emissions from construction-related electricity or natural gas. Construction-related electricity and natural gas emissions vary based on the amount of electric power used during construction and other unknown factors which make them too speculative to quantify.

Table 6 – Project Construction Equipment GHG Emissions

Year	Metric Tons per year (MT/yr)			
	Total CO ₂	Total CH ₄	Total N ₂ O	Total CO ₂ E
2022	310.31	0.04	0.01	314.48
2023	1,049.39	0.10	0.03	1,061.08
2024	781.20	0.07	0.02	789.75
Total	2,140.90	0.21	0.06	2,165.31
			Amortized	72.18

Evaluation of the table above indicates that an estimated 2,165.3 MTCO₂E will occur from Project construction equipment over the course of the estimated construction period. Since the draft SCAQMD GHG threshold Guidance document released in October 2008¹⁹ recommends that construction emissions be amortized for a project lifetime of 30 years to ensure that GHG reduction measures address construction GHG emissions as part of the operational reduction strategies. Therefore, the total GHG emissions from Project construction were amortized and are included in **Table 8**, below.

Vegetation Change

CalEEMod estimates the GHG emissions associated with the one-time change in vegetation resulting from development and the GHG emissions sequestered as a result of planting new trees on a project site. Planting trees as part of the Project will sequester CO₂ while they are actively growing. Approximately 202 trees from miscellaneous species are estimated to be planted as part of this Project based on the conceptual landscaping plan.²⁰ As shown in the CalEEMod output (attached), the estimated one-time sequestration of CO₂ from the planting of Project trees is 143.02 MTCO₂E. Assuming a Project life of 30 years, this equates to a net reduction of 4.77 MTCO₂E annually. These results were included in the analysis of the Project's total operational emissions in **Table 8**, below.

Long-Term Analysis

Area Source Emissions

CalEEMod estimates the GHG emissions associated with area sources which include landscape equipment emissions, architectural coating, consumer products, and hearths. Landscape equipment servicing the Project site create CO₂ resulting from fuel combustion based on the Project's land uses. Consumer products consist of consumer use of solvents and personal care products and architectural coatings consist of an average building square footage to be repainted each year. Hearth emissions apply to proposed dwelling units and as stated above are not included because the Project does not

¹⁸ CO₂E is the sum of CO₂ emissions estimated plus the sum of CH₄ and N₂O emissions estimated multiplied by their respective global warming potential (GWP).

¹⁹ [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2)

²⁰ Albert A Webb Associates, *Conceptual Landscape Plan*, December 12, 2021.

propose fireplaces. **Table 8**, below summarizes the GHG emissions from the Project’s area source emissions.

Energy-Related Emissions

CalEEMod estimates the GHG emissions associated with building electricity and natural gas usage (non-hearth) for each land use type. Electricity and natural gas used in buildings is typically generated at an off-site power plant which indirectly generates GHG emissions. The default energy usage values used in CalEEMod are based on the CEC sponsored California Commercial End Use Survey and Residential Appliance Saturation Survey studies and reflect 2019 Title 24 improvements (CalEEMod User’s Guide, Appendix A). The following table summarizes the GHG emissions estimates reported by CalEEMod for the Project.

Table 7 – Energy-Related GHG Emissions

Source	Metric Tons per year (MT/yr)			
	CO ₂	CH ₄	N ₂ O	Total CO ₂ E
Electricity	170.59	0.01	0.00	171.48
Natural Gas	167.89	0.00	0.00	168.89
Total	338.48	0.01	0.00	340.37

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

Mobile Source Emissions

CalEEMod estimates the annual GHG emissions from Project-related vehicle usage based on trip generation data contained in defaults or in a project-specific traffic analysis. As stated above, Project-specific TIA was utilized. **Table 8** shows the mobile source emissions from the Project.

Solid Waste Emissions

CalEEMod also calculates the GHG emissions associated with the disposal of solid waste into landfills based on default data contained within the model for waste disposal rates, composition, and the characteristics of landfills throughout the state. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. This analysis assumes a solid waste diversion from the landfills consistent with data provided by the state, 37 percent.²¹ The waste diversion rate was evaluated in the model by selecting the mitigation option for solid waste and **Table 8** shows the solid waste emissions from the Project utilizing this waste reduction rate.

Water-Related Energy Usage

Electricity is also indirectly used in water supply, treatment, and distribution, as well as wastewater treatment in Southern California and plays a large role in GHG production.

There are three processes necessary to supply potable water to urban users (i.e., residential, commercial, and industrial): (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, the wastewater is treated and either reused as reclaimed/recycled water or returned to the environment. CalEEMod calculates the GHG emissions from these processes based on default emissions factors and water/wastewater generation rates for a project’s location. Default values were used for electricity intensity factor associated with the supply and conveyance of water from its source which assumes that the water is being imported from Northern California. Defaults were used for indoor water consumption from the apartment and the swimming pool proposed for the Project. Outdoor water demand was obtained from the conceptual landscaping plan.²² **Table 8** shows the resulting GHG emissions from water-related energy usage for the Project.

²¹ CalRecycle, *California’s 2019 Per Capita Disposal Rate Estimate*, webpage. Available at: <https://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/mostrecent>, accessed February 2022.

²² Albert A Webb Associates, *Conceptual Landscape Plan*, December 12, 2021.

Total Project GHG Emissions

As shown on **Table 8 – Total Project-Related GHG Emissions**, using all the emissions quantified above, the total GHG emissions generated from the Project is approximately 2,229.5 MTCO₂E/yr which includes construction-related emissions amortized over a typical project life of 30 years.

Table 8 – Total Project-Related GHG Emissions

Source	Metric Tons per year (MT/yr)			
	CO ₂	CH ₄	N ₂ O	Total CO ₂ E
Amortized Construction	--	--	--	72.18
Vegetation	--	--	--	-4.77
Area	3.51	0.00	0.00	3.60
Energy	338.49	0.01	0.00	340.37
Mobile	1,704.75	0.09	0.08	1,732.22
Solid Waste	13.13	0.78	0.00	32.54
Water	38.97	0.45	0.01	53.37
Total	2,098.85	1.33	0.09	2,229.51

Note: Emissions reported as zero are rounded and not necessarily equal to zero.

The total GHG emissions from the Project are below the City's screening threshold of 3,000 MTCO₂E/yr.

Energy Analysis

An energy analysis was prepared to quantify anticipated energy usage associated with construction and operation of the proposed Project and determine if the usage amounts are inefficient, wasteful, or unnecessary for the land use type. For the reasons identified below, the Project would not result in a wasteful, inefficient, or unnecessary consumption of energy during Project construction or operation.

Construction

Project construction would require the use of construction equipment for grading, paving, as well as construction workers and vendors traveling to and from the Project site. Construction equipment requires diesel as the fuel source and construction worker and vendor trips use both gasoline and diesel fuel.

Fuel consumption from on-site heavy-duty construction equipment was calculated based on the equipment mix and usage factors provided in the CalEEMod construction output files attached herewith. The total horsepower was then multiplied by fuel usage estimates per horsepower-hour included in Table A9-3-E of the SCAQMD CEQA Air Quality Handbook. Fuel consumption from construction worker and vendor/delivery trucks was calculated using the trip rates and distances provided in the CalEEMod construction output files. Total vehicle miles traveled (VMT) was then calculated for each type of construction-related trip and divided by the corresponding county-specific miles per gallon factor using California Air Resources Board's (CARB-B) EMFAC 2017 model. EMFAC provides the total annual VMT and fuel consumed for each vehicle type. Consistent with CalEEMod, construction worker trips were assumed to include 50 percent light duty gasoline auto and 50 percent light duty gasoline trucks. Construction vendor trucks were assumed to be medium-duty and heavy-duty diesel trucks. Please refer to detailed calculations attached herewith.

As shown in the attached tables, a total of approximately 150,904 gallons of diesel fuel and approximately 222,644 gallons of gasoline are estimated to be consumed during Project construction.

Fuel consumption from on-site heavy-duty construction equipment and construction would be temporary in nature and uses a limited number of equipment, which would represent a negligible demand on energy resources. Construction equipment is also required to comply with regulations limiting idling to five minutes or less (13 CCR § 2449(d)(3)), Furthermore, there are no unusual Project site characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the state. For comparison, the State of California consumed 12.7 billion gallons of gasoline and 2.8 billion gallons of diesel fuel in 2021, which is

the most recent published data.²³ Thus, the fuel usage during Project construction would account for a negligible percent of the existing gasoline and diesel fuel related energy consumption in California. Furthermore, it is expected that construction-related fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Operation

Energy consumption related to Project operations includes onsite electricity and natural gas usage and transportation fuel consumption.

Annual electricity and natural gas consumption were calculated using demand factors provided in the CalEEMod output attached herewith. The Project's electrical consumption was estimated to be approximately 1,157,300 kilowatt-hours (kWh) of electricity per year, this is the sum of the building electricity (961,935 kWh/year) and electricity related to the Project's water consumption (195,364 kWh/year). Additionally, the Project's natural gas consumption was estimated to be approximately 3,146,190 kilo-British thermal units (kBTUs) or approximately 31,462 therms. Please refer to detailed calculations attached herewith.

In comparison to the Project, Southern California Edison (SCE), who provides service to the City, consumed approximately 83.5 billion kWh and the Southern California Gas Company consumed approximately 5.2 billion therms in 2020.²⁴ At full build-out, the Project site's energy demand would be a negligible amount of the existing electricity and the natural gas demand in the respective service area.

Energy impacts associated with transportation during operation were also assessed using the traffic data contained in the CalEEMod output attached herewith. Based on the annual VMT, gasoline and diesel consumption rates were calculated using the Riverside County-specific miles per gallon in EMFAC2017. As shown in the attached tables, a total of approximately 160,693 gallons of gasoline fuel and approximately 25,860 gallons of diesel fuel is estimated to be consumed each year. As stated above, the State of California consumed approximately 12.7 billion gallons of gasoline and 2.7 billion gallons of diesel fuel in 2021. Thus, the annual fuel usage during Project operation would account for a negligible percent of the existing gasoline and diesel fuel related energy consumption in California.

The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other multi-family land use projects of similar scale and configuration. Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

■ Conclusion

The conclusion of this analysis indicates that construction of the proposed Project will not exceed criteria pollutant thresholds established by SCAQMD on a regional or localized level without mitigation required. Additionally, the Project will not contribute to creation of a CO hot spot. The Project's GHG emissions do not exceed the City's screening threshold of 3,000 MTCO₂E/yr. Finally, the Project will result in the wasteful, inefficient, or unnecessary consumption of energy during construction or operation. Should you have any questions, please contact me at (951) 686-1070.

²³ California Department of Tax and Fee Administration, *Fuel Taxes, Statistics and Reports*. Available at <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>, accessed February 2022.

²⁴ California Energy Commission, *California Energy Consumption Database*, 2020. Available at <https://ecdms.energy.ca.gov/>, accessed February 2022.

CALEEMOD OUTPUT FILES

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Vernola Market Place Apparment Community
Riverside-South Coast County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	172.93	1000sqft	3.97	172,933.20	0
Other Non-Asphalt Surfaces	97.31	1000sqft	2.23	97,311.00	0
Recreational Swimming Pool	1.23	1000sqft	0.03	1,225.00	0
Apartments Low Rise	208.00	Dwelling Unit	2.51	313,895.00	595

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2024
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 Architectural Site Plan, include offsite improvements.

Construction Phase - Per Applicant

Off-road Equipment - Per Applicant, 8 hours per day.

Off-road Equipment - Per Applicant team; 8 hours per day

Off-road Equipment -

Trips and VMT - Two (2) daily water truck trips added to grading and paving activities per Rule 403. 0.80 mi. hauling trips per Applicant.

Grading - Per Engineer

Vehicle Trips - MFR Trip Rates per TIA. Swimming Pool Accounted for Under MFR

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Woodstoves - No Fireplaces assumed.

Energy Use - Added 0.35 lighting energy intensity to account for parking lot lighting.

Water And Wastewater - Per Landscape Plan

Sequestration - Per Landscape Plan

Construction Off-road Equipment Mitigation - 3 times - Per Rule 403

Waste Mitigation - Per CalRecycle

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	478.00
tblConstructionPhase	NumDays	230.00	521.00
tblConstructionPhase	NumDays	20.00	22.00
tblEnergyUse	LightingElect	0.00	0.35
tblEnergyUse	LightingElect	0.00	0.35
tblFireplaces	NumberGas	176.80	0.00
tblFireplaces	NumberNoFireplace	20.80	208.00
tblFireplaces	NumberWood	10.40	0.00
tblGrading	MaterialExported	0.00	49,000.00
tblLandUse	LandUseSquareFeet	172,930.00	172,933.20
tblLandUse	LandUseSquareFeet	97,310.00	97,311.00
tblLandUse	LandUseSquareFeet	1,230.00	1,225.00
tblLandUse	LandUseSquareFeet	208,000.00	313,895.00
tblLandUse	LotAcreage	13.00	2.51
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSequestration	NumberOfNewTrees	0.00	202.00
tblTripsAndVMT	HaulingTripLength	20.00	0.80

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	OutdoorWaterUseRate	8,543,675.71	1,616,208.00
tblWater	OutdoorWaterUseRate	44,586.30	0.00
tblWoodstoves	NumberCatalytic	10.40	0.00
tblWoodstoves	NumberNoncatalytic	10.40	0.00

2.0 Emissions Summary

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	8.6519	37.3784	51.4931	0.1057	7.7457	1.7838	8.7089	3.5711	1.6830	4.4581	0.0000	10,387.23 85	10,387.23 85	1.5298	0.2723	10,505.45 20
2023	8.3033	27.2476	41.9778	0.0928	3.9725	1.2291	5.2016	1.0633	1.1818	2.2451	0.0000	9,126.223 4	9,126.223 4	0.8522	0.2578	9,224.352 3
2024	8.0461	25.5903	41.1144	0.0916	3.9725	1.0751	5.0475	1.0633	1.0332	2.0964	0.0000	9,007.372 5	9,007.372 5	0.8353	0.2494	9,102.582 8
Maximum	8.6519	37.3784	51.4931	0.1057	7.7457	1.7838	8.7089	3.5711	1.6830	4.4581	0.0000	10,387.23 85	10,387.23 85	1.5298	0.2723	10,505.45 20

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	8.6519	37.3784	51.4931	0.1057	3.9725	1.7838	5.4072	1.4560	1.6830	2.6374	0.0000	10,387.23 85	10,387.23 85	1.5298	0.2723	10,505.45 20
2023	8.3033	27.2476	41.9778	0.0928	3.9725	1.2291	5.2016	1.0633	1.1818	2.2451	0.0000	9,126.223 4	9,126.223 4	0.8522	0.2578	9,224.352 3
2024	8.0461	25.5903	41.1144	0.0916	3.9725	1.0751	5.0475	1.0633	1.0332	2.0964	0.0000	9,007.372 5	9,007.372 5	0.8353	0.2494	9,102.582 8
Maximum	8.6519	37.3784	51.4931	0.1057	3.9725	1.7838	5.4072	1.4560	1.6830	2.6374	0.0000	10,387.23 85	10,387.23 85	1.5298	0.2723	10,505.45 20

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034
Energy	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
Mobile	5.2706	6.8883	51.7220	0.1200	12.2243	0.0914	12.3157	3.2613	0.0857	3.3469		12,221.9801	12,221.9801	0.5834	0.5588	12,403.1001
Total	12.7603	7.8806	69.2407	0.1260	12.2243	0.2508	12.4751	3.2613	0.2451	3.5063	0.0000	13,267.0203	13,267.0203	0.6326	0.5774	13,454.9116

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	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034
Energy	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
Mobile	5.2706	6.8883	51.7220	0.1200	12.2243	0.0914	12.3157	3.2613	0.0857	3.3469		12,221.9801	12,221.9801	0.5834	0.5588	12,403.1001
Total	12.7603	7.8806	69.2407	0.1260	12.2243	0.2508	12.4751	3.2613	0.2451	3.5063	0.0000	13,267.0203	13,267.0203	0.6326	0.5774	13,454.9116

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2022	9/30/2022	5	22	
2	Building Construction	Building Construction	10/1/2022	9/30/2024	5	521	
3	Paving	Paving	10/1/2022	10/28/2022	5	20	
4	Architectural Coating	Architectural Coating	12/1/2022	9/30/2024	5	478	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 6.2

Residential Indoor: 635,637; Residential Outdoor: 211,879; Non-Residential Indoor: 600; Non-Residential Outdoor: 200; Striped Parking Area: 16,215 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Tractors/Loaders/Backhoes	3	8.00	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	2	8.00	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
Grading	6	15.00	2.00	6,125.00	14.70	6.90	0.80	LD_Mix	HDT_Mix	HHDT
Building Construction	11	264.00	67.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	53.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 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					7.3646	0.0000	7.3646	3.4675	0.0000	3.4675			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.046 4	2,872.046 4	0.9289		2,895.268 4
Total	1.9486	20.8551	15.2727	0.0297	7.3646	0.9409	8.3055	3.4675	0.8656	4.3330		2,872.046 4	2,872.046 4	0.9289		2,895.268 4

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	0.3901	7.0065	4.9250	0.0150	0.2006	0.0203	0.2209	0.0555	0.0194	0.0749		1,596.157 1	1,596.157 1	0.0274	0.2513	1,671.716 3
Vendor	3.2500e-003	0.0846	0.0294	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.5891	38.5891	4.1000e-004	5.7200e-003	40.3046
Worker	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	0.4525	7.1294	5.5515	0.0169	0.3811	0.0224	0.4034	0.1037	0.0214	0.1250		1,788.780 3	1,788.780 3	0.0316	0.2608	1,867.287 3

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 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					2.8722	0.0000	2.8722	1.3523	0.0000	1.3523			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.046 4	2,872.046 4	0.9289		2,895.268 4
Total	1.9486	20.8551	15.2727	0.0297	2.8722	0.9409	3.8131	1.3523	0.8656	2.2179	0.0000	2,872.046 4	2,872.046 4	0.9289		2,895.268 4

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	0.3901	7.0065	4.9250	0.0150	0.2006	0.0203	0.2209	0.0555	0.0194	0.0749		1,596.157 1	1,596.157 1	0.0274	0.2513	1,671.716 3
Vendor	3.2500e-003	0.0846	0.0294	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.5891	38.5891	4.1000e-004	5.7200e-003	40.3046
Worker	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	0.4525	7.1294	5.5515	0.0169	0.3811	0.0224	0.4034	0.1037	0.0214	0.1250		1,788.780 3	1,788.780 3	0.0316	0.2608	1,867.287 3

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	2.4746	22.6236	24.7911	0.0420		1.1583	1.1583		1.1060	1.1060		3,983.221 1	3,983.221 1	0.7303		4,001.478 0
Total	2.4746	22.6236	24.7911	0.0420		1.1583	1.1583		1.1060	1.1060		3,983.221 1	3,983.221 1	0.7303		4,001.478 0

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	0.1090	2.8332	0.9851	0.0122	0.4291	0.0409	0.4700	0.1236	0.0391	0.1626		1,292.733 8	1,292.733 8	0.0137	0.1917	1,350.204 4
Worker	1.0400	0.6740	10.5098	0.0268	2.9509	0.0147	2.9656	0.7826	0.0135	0.7961		2,711.000 1	2,711.000 1	0.0676	0.0671	2,732.688 3
Total	1.1491	3.5071	11.4950	0.0390	3.3800	0.0555	3.4356	0.9062	0.0526	0.9588		4,003.733 9	4,003.733 9	0.0813	0.2588	4,082.892 8

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	2.4746	22.6236	24.7911	0.0420		1.1583	1.1583		1.1060	1.1060	0.0000	3,983.221 1	3,983.221 1	0.7303		4,001.478 0
Total	2.4746	22.6236	24.7911	0.0420		1.1583	1.1583		1.1060	1.1060	0.0000	3,983.221 1	3,983.221 1	0.7303		4,001.478 0

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	0.1090	2.8332	0.9851	0.0122	0.4291	0.0409	0.4700	0.1236	0.0391	0.1626		1,292.733 8	1,292.733 8	0.0137	0.1917	1,350.204 4
Worker	1.0400	0.6740	10.5098	0.0268	2.9509	0.0147	2.9656	0.7826	0.0135	0.7961		2,711.000 1	2,711.000 1	0.0676	0.0671	2,732.688 3
Total	1.1491	3.5071	11.4950	0.0390	3.3800	0.0555	3.4356	0.9062	0.0526	0.9588		4,003.733 9	4,003.733 9	0.0813	0.2588	4,082.892 8

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	2.2852	20.8689	24.6488	0.0420		1.0046	1.0046		0.9594	0.9594		3,984.2227	3,984.2227	0.7218		4,002.2684
Total	2.2852	20.8689	24.6488	0.0420		1.0046	1.0046		0.9594	0.9594		3,984.2227	3,984.2227	0.7218		4,002.2684

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	0.0000	0.0000	0.0000	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	0.0755	2.1889	0.9013	0.0117	0.4291	0.0191	0.4482	0.1236	0.0182	0.1418		1,241.3157	1,241.3157	0.0127	0.1834	1,296.2941
Worker	0.9639	0.5956	9.6590	0.0260	2.9509	0.0138	2.9647	0.7826	0.0127	0.7953		2,623.4745	2,623.4745	0.0607	0.0619	2,643.4472
Total	1.0394	2.7845	10.5603	0.0377	3.3800	0.0329	3.4129	0.9062	0.0309	0.9371		3,864.7902	3,864.7902	0.0733	0.2454	3,939.7412

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	2.2852	20.8689	24.6488	0.0420		1.0046	1.0046		0.9594	0.9594	0.0000	3,984.2227	3,984.2227	0.7218		4,002.2684
Total	2.2852	20.8689	24.6488	0.0420		1.0046	1.0046		0.9594	0.9594	0.0000	3,984.2227	3,984.2227	0.7218		4,002.2684

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	0.0000	0.0000	0.0000	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	0.0755	2.1889	0.9013	0.0117	0.4291	0.0191	0.4482	0.1236	0.0182	0.1418		1,241.3157	1,241.3157	0.0127	0.1834	1,296.2941
Worker	0.9639	0.5956	9.6590	0.0260	2.9509	0.0138	2.9647	0.7826	0.0127	0.7953		2,623.4745	2,623.4745	0.0607	0.0619	2,643.4472
Total	1.0394	2.7845	10.5603	0.0377	3.3800	0.0329	3.4129	0.9062	0.0309	0.9371		3,864.7902	3,864.7902	0.0733	0.2454	3,939.7412

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1371	19.5140	24.5548	0.0420		0.8779	0.8779		0.8381	0.8381		3,984.7815	3,984.7815	0.7140		4,002.6308
Total	2.1371	19.5140	24.5548	0.0420		0.8779	0.8779		0.8381	0.8381		3,984.7815	3,984.7815	0.7140		4,002.6308

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	0.0743	2.1891	0.8910	0.0115	0.4291	0.0189	0.4481	0.1236	0.0181	0.1417		1,222.1844	1,222.1844	0.0131	0.1803	1,276.2504
Worker	0.8983	0.5305	9.0290	0.0251	2.9509	0.0132	2.9641	0.7826	0.0121	0.7947		2,539.9619	2,539.9619	0.0549	0.0575	2,558.4823
Total	0.9726	2.7196	9.9200	0.0367	3.3800	0.0321	3.4121	0.9062	0.0302	0.9364		3,762.1463	3,762.1463	0.0680	0.2379	3,834.7327

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1371	19.5140	24.5548	0.0420		0.8779	0.8779		0.8381	0.8381	0.0000	3,984.7815	3,984.7815	0.7140		4,002.6308
Total	2.1371	19.5140	24.5548	0.0420		0.8779	0.8779		0.8381	0.8381	0.0000	3,984.7815	3,984.7815	0.7140		4,002.6308

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	0.0743	2.1891	0.8910	0.0115	0.4291	0.0189	0.4481	0.1236	0.0181	0.1417		1,222.1844	1,222.1844	0.0131	0.1803	1,276.2504
Worker	0.8983	0.5305	9.0290	0.0251	2.9509	0.0132	2.9641	0.7826	0.0121	0.7947		2,539.9619	2,539.9619	0.0549	0.0575	2,558.4823
Total	0.9726	2.7196	9.9200	0.0367	3.3800	0.0321	3.4121	0.9062	0.0302	0.9364		3,762.1463	3,762.1463	0.0680	0.2379	3,834.7327

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.5201					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6229	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104

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	3.2500e-003	0.0846	0.0294	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.5891	38.5891	4.1000e-004	5.7200e-003	40.3046
Worker	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	0.0623	0.1229	0.6266	1.8800e-003	0.1805	2.0500e-003	0.1825	0.0482	1.9400e-003	0.0501		192.6232	192.6232	4.2500e-003	9.5300e-003	195.5710

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	0.5201					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6229	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4

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	3.2500e-003	0.0846	0.0294	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.5891	38.5891	4.1000e-004	5.7200e-003	40.3046
Worker	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	0.0623	0.1229	0.6266	1.8800e-003	0.1805	2.0500e-003	0.1825	0.0482	1.9400e-003	0.0501		192.6232	192.6232	4.2500e-003	9.5300e-003	195.5710

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 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					
Archit. Coating	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5454	3.7560	4.8363	7.9200e-003		0.2179	0.2179		0.2179	0.2179		750.5281	750.5281	0.0489		751.7497
Total	4.8195	3.7560	4.8363	7.9200e-003		0.2179	0.2179		0.2179	0.2179		750.5281	750.5281	0.0489		751.7497

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	0.2088	0.1353	2.1099	5.3800e-003	0.5924	2.9500e-003	0.5954	0.1571	2.7100e-003	0.1598		544.2538	544.2538	0.0136	0.0135	548.6079
Total	0.2088	0.1353	2.1099	5.3800e-003	0.5924	2.9500e-003	0.5954	0.1571	2.7100e-003	0.1598		544.2538	544.2538	0.0136	0.0135	548.6079

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 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					
Archit. Coating	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5454	3.7560	4.8363	7.9200e-003		0.2179	0.2179		0.2179	0.2179	0.0000	750.5281	750.5281	0.0489		751.7497
Total	4.8195	3.7560	4.8363	7.9200e-003		0.2179	0.2179		0.2179	0.2179	0.0000	750.5281	750.5281	0.0489		751.7497

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	0.2088	0.1353	2.1099	5.3800e-003	0.5924	2.9500e-003	0.5954	0.1571	2.7100e-003	0.1598		544.2538	544.2538	0.0136	0.0135	548.6079
Total	0.2088	0.1353	2.1099	5.3800e-003	0.5924	2.9500e-003	0.5954	0.1571	2.7100e-003	0.1598		544.2538	544.2538	0.0136	0.0135	548.6079

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5111	3.4747	4.8296	7.9200e-003		0.1889	0.1889		0.1889	0.1889		750.5281	750.5281	0.0449		751.6507
Total	4.7851	3.4747	4.8296	7.9200e-003		0.1889	0.1889		0.1889	0.1889		750.5281	750.5281	0.0449		751.6507

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	0.1935	0.1196	1.9391	5.2100e-003	0.5924	2.7700e-003	0.5952	0.1571	2.5500e-003	0.1597		526.6824	526.6824	0.0122	0.0124	530.6920
Total	0.1935	0.1196	1.9391	5.2100e-003	0.5924	2.7700e-003	0.5952	0.1571	2.5500e-003	0.1597		526.6824	526.6824	0.0122	0.0124	530.6920

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5111	3.4747	4.8296	7.9200e-003		0.1889	0.1889		0.1889	0.1889	0.0000	750.5281	750.5281	0.0449		751.6507
Total	4.7851	3.4747	4.8296	7.9200e-003		0.1889	0.1889		0.1889	0.1889	0.0000	750.5281	750.5281	0.0449		751.6507

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	0.1935	0.1196	1.9391	5.2100e-003	0.5924	2.7700e-003	0.5952	0.1571	2.5500e-003	0.1597		526.6824	526.6824	0.0122	0.0124	530.6920
Total	0.1935	0.1196	1.9391	5.2100e-003	0.5924	2.7700e-003	0.5952	0.1571	2.5500e-003	0.1597		526.6824	526.6824	0.0122	0.0124	530.6920

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4820	3.2501	4.8270	7.9200e-003		0.1624	0.1624		0.1624	0.1624		750.5281	750.5281	0.0423		751.5847
Total	4.7561	3.2501	4.8270	7.9200e-003		0.1624	0.1624		0.1624	0.1624		750.5281	750.5281	0.0423		751.5847

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	0.1803	0.1065	1.8126	5.0400e-003	0.5924	2.6400e-003	0.5951	0.1571	2.4300e-003	0.1595		509.9166	509.9166	0.0110	0.0116	513.6347
Total	0.1803	0.1065	1.8126	5.0400e-003	0.5924	2.6400e-003	0.5951	0.1571	2.4300e-003	0.1595		509.9166	509.9166	0.0110	0.0116	513.6347

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4820	3.2501	4.8270	7.9200e-003		0.1624	0.1624		0.1624	0.1624	0.0000	750.5281	750.5281	0.0423		751.5847
Total	4.7561	3.2501	4.8270	7.9200e-003		0.1624	0.1624		0.1624	0.1624	0.0000	750.5281	750.5281	0.0423		751.5847

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	0.1803	0.1065	1.8126	5.0400e-003	0.5924	2.6400e-003	0.5951	0.1571	2.4300e-003	0.1595		509.9166	509.9166	0.0110	0.0116	513.6347
Total	0.1803	0.1065	1.8126	5.0400e-003	0.5924	2.6400e-003	0.5951	0.1571	2.4300e-003	0.1595		509.9166	509.9166	0.0110	0.0116	513.6347

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	5.2706	6.8883	51.7220	0.1200	12.2243	0.0914	12.3157	3.2613	0.0857	3.3469		12,221.9801	12,221.9801	0.5834	0.5588	12,403.1001
Unmitigated	5.2706	6.8883	51.7220	0.1200	12.2243	0.0914	12.3157	3.2613	0.0857	3.3469		12,221.9801	12,221.9801	0.5834	0.5588	12,403.1001

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,522.56	1,693.12	1306.24	5,180,480	5,180,480
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,522.56	1,693.12	1,306.24	5,180,480	5,180,480

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Recreational Swimming Pool	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
NaturalGas Unmitigated	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Apartments Low Rise	8619.7	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081

Vernola Market Place Appartment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	8.6197	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081

6.0 Area Detail

6.1 Mitigation Measures Area

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034
Unmitigated	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034

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	0.5597					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5183	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952		30.9583	30.9583	0.0298		31.7034
Total	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.5597					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5183	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952		30.9583	30.9583	0.0298		31.7034
Total	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034

7.0 Water Detail

7.1 Mitigation Measures Water

Vernola Market Place Apparment Community - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Vernola Market Place Apparment Community
Riverside-South Coast County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	172.93	1000sqft	3.97	172,933.20	0
Other Non-Asphalt Surfaces	97.31	1000sqft	2.23	97,311.00	0
Recreational Swimming Pool	1.23	1000sqft	0.03	1,225.00	0
Apartments Low Rise	208.00	Dwelling Unit	2.51	313,895.00	595

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Architectural Site Plan, include offsite improvements.

Construction Phase - Per Applicant

Off-road Equipment - Per Applicant, 8 hours per day.

Off-road Equipment - Per Applicant team; 8 hours per day

Off-road Equipment -

Trips and VMT - Two (2) daily water truck trips added to grading and paving activities per Rule 403. 0.80 mi. hauling trips per Applicant.

Grading - Per Engineer

Vehicle Trips - MFR Trip Rates per TIA. Swimming Pool Accounted for Under MFR

Vernola Market Place Appartment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Woodstoves - No Fireplaces assumed.

Energy Use - Added 0.35 lighting energy intensity to account for parking lot lighting.

Water And Wastewater - Per Landscape Plan

Sequestration - Per Landscape Plan

Construction Off-road Equipment Mitigation - 3 times - Per Rule 403

Waste Mitigation - Per CalRecycle

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	478.00
tblConstructionPhase	NumDays	230.00	521.00
tblConstructionPhase	NumDays	20.00	22.00
tblEnergyUse	LightingElect	0.00	0.35
tblEnergyUse	LightingElect	0.00	0.35
tblFireplaces	NumberGas	176.80	0.00
tblFireplaces	NumberNoFireplace	20.80	208.00
tblFireplaces	NumberWood	10.40	0.00
tblGrading	MaterialExported	0.00	49,000.00
tblLandUse	LandUseSquareFeet	172,930.00	172,933.20
tblLandUse	LandUseSquareFeet	97,310.00	97,311.00
tblLandUse	LandUseSquareFeet	1,230.00	1,225.00
tblLandUse	LandUseSquareFeet	208,000.00	313,895.00
tblLandUse	LotAcreage	13.00	2.51
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSequestration	NumberOfNewTrees	0.00	202.00
tblTripsAndVMT	HaulingTripLength	20.00	0.80

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	OutdoorWaterUseRate	8,543,675.71	1,616,208.00
tblWater	OutdoorWaterUseRate	44,586.30	0.00
tblWoodstoves	NumberCatalytic	10.40	0.00
tblWoodstoves	NumberNoncatalytic	10.40	0.00

2.0 Emissions Summary

Vernola Market Place Appartment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	8.5650	37.5616	49.4265	0.1030	7.7457	1.7839	8.7095	3.5711	1.6831	4.4586	0.0000	10,118.79 56	10,118.79 56	1.5291	0.2746	10,237.60 31
2023	8.2251	27.4069	39.8280	0.0899	3.9725	1.2292	5.2016	1.0633	1.1819	2.2451	0.0000	8,833.489 5	8,833.489 5	0.8517	0.2602	8,932.307 9
2024	7.9760	25.7465	39.1108	0.0888	3.9725	1.0752	5.0476	1.0633	1.0332	2.0965	0.0000	8,724.555 7	8,724.555 7	0.8349	0.2516	8,820.412 3
Maximum	8.5650	37.5616	49.4265	0.1030	7.7457	1.7839	8.7095	3.5711	1.6831	4.4586	0.0000	10,118.79 56	10,118.79 56	1.5291	0.2746	10,237.60 31

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	8.5650	37.5616	49.4265	0.1030	3.9725	1.7839	5.4073	1.4560	1.6831	2.6375	0.0000	10,118.79 56	10,118.79 56	1.5291	0.2746	10,237.60 31
2023	8.2251	27.4069	39.8280	0.0899	3.9725	1.2292	5.2016	1.0633	1.1819	2.2451	0.0000	8,833.489 5	8,833.489 5	0.8517	0.2602	8,932.307 9
2024	7.9760	25.7465	39.1108	0.0888	3.9725	1.0752	5.0476	1.0633	1.0332	2.0965	0.0000	8,724.555 7	8,724.555 7	0.8349	0.2516	8,820.412 3
Maximum	8.5650	37.5616	49.4265	0.1030	3.9725	1.7839	5.4073	1.4560	1.6831	2.6375	0.0000	10,118.79 56	10,118.79 56	1.5291	0.2746	10,237.60 31

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034
Energy	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
Mobile	4.4937	7.3059	45.6898	0.1114	12.2243	0.0915	12.3157	3.2613	0.0857	3.3470		11,351.6996	11,351.6996	0.5962	0.5705	11,536.6227
Total	11.9835	8.2981	63.2086	0.1174	12.2243	0.2509	12.4751	3.2613	0.2451	3.5064	0.0000	12,396.7398	12,396.7398	0.6455	0.5891	12,588.4342

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	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034
Energy	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
Mobile	4.4937	7.3059	45.6898	0.1114	12.2243	0.0915	12.3157	3.2613	0.0857	3.3470		11,351.6996	11,351.6996	0.5962	0.5705	11,536.6227
Total	11.9835	8.2981	63.2086	0.1174	12.2243	0.2509	12.4751	3.2613	0.2451	3.5064	0.0000	12,396.7398	12,396.7398	0.6455	0.5891	12,588.4342

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2022	9/30/2022	5	22	
2	Building Construction	Building Construction	10/1/2022	9/30/2024	5	521	
3	Paving	Paving	10/1/2022	10/28/2022	5	20	
4	Architectural Coating	Architectural Coating	12/1/2022	9/30/2024	5	478	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 6.2

Residential Indoor: 635,637; Residential Outdoor: 211,879; Non-Residential Indoor: 600; Non-Residential Outdoor: 200; Striped Parking Area: 16,215 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Tractors/Loaders/Backhoes	3	8.00	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	2	8.00	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
Grading	6	15.00	2.00	6,125.00	14.70	6.90	0.80	LD_Mix	HDT_Mix	HHDT
Building Construction	11	264.00	67.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	53.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 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					7.3646	0.0000	7.3646	3.4675	0.0000	3.4675			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.046 4	2,872.046 4	0.9289		2,895.268 4
Total	1.9486	20.8551	15.2727	0.0297	7.3646	0.9409	8.3055	3.4675	0.8656	4.3330		2,872.046 4	2,872.046 4	0.9289		2,895.268 4

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	0.3482	7.4692	5.1434	0.0151	0.2006	0.0209	0.2215	0.0555	0.0200	0.0755		1,609.195 6	1,609.195 6	0.0254	0.2533	1,685.315 8
Vendor	3.1200e-003	0.0891	0.0305	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.6312	38.6312	4.0000e-004	5.7300e-003	40.3497
Worker	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	0.4065	7.5981	5.6579	0.0169	0.3811	0.0229	0.4040	0.1037	0.0219	0.1256		1,787.350 4	1,787.350 4	0.0296	0.2629	1,866.447 7

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 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					2.8722	0.0000	2.8722	1.3523	0.0000	1.3523			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.046 4	2,872.046 4	0.9289		2,895.268 4
Total	1.9486	20.8551	15.2727	0.0297	2.8722	0.9409	3.8131	1.3523	0.8656	2.2179	0.0000	2,872.046 4	2,872.046 4	0.9289		2,895.268 4

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	0.3482	7.4692	5.1434	0.0151	0.2006	0.0209	0.2215	0.0555	0.0200	0.0755		1,609.195 6	1,609.195 6	0.0254	0.2533	1,685.315 8
Vendor	3.1200e-003	0.0891	0.0305	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.6312	38.6312	4.0000e-004	5.7300e-003	40.3497
Worker	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	0.4065	7.5981	5.6579	0.0169	0.3811	0.0229	0.4040	0.1037	0.0219	0.1256		1,787.350 4	1,787.350 4	0.0296	0.2629	1,866.447 7

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	2.4746	22.6236	24.7911	0.0420		1.1583	1.1583		1.1060	1.1060		3,983.221 1	3,983.221 1	0.7303		4,001.478 0
Total	2.4746	22.6236	24.7911	0.0420		1.1583	1.1583		1.1060	1.1060		3,983.221 1	3,983.221 1	0.7303		4,001.478 0

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	0.1044	2.9848	1.0230	0.0122	0.4291	0.0410	0.4701	0.1236	0.0392	0.1627		1,294.143 6	1,294.143 6	0.0135	0.1921	1,351.716 2
Worker	0.9716	0.6996	8.5175	0.0243	2.9509	0.0147	2.9656	0.7826	0.0135	0.7961		2,455.615 8	2,455.615 8	0.0671	0.0687	2,477.766 7
Total	1.0759	3.6844	9.5405	0.0365	3.3800	0.0556	3.4357	0.9062	0.0527	0.9589		3,749.759 4	3,749.759 4	0.0806	0.2608	3,829.482 9

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	2.4746	22.6236	24.7911	0.0420		1.1583	1.1583		1.1060	1.1060	0.0000	3,983.221 1	3,983.221 1	0.7303		4,001.478 0
Total	2.4746	22.6236	24.7911	0.0420		1.1583	1.1583		1.1060	1.1060	0.0000	3,983.221 1	3,983.221 1	0.7303		4,001.478 0

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	0.1044	2.9848	1.0230	0.0122	0.4291	0.0410	0.4701	0.1236	0.0392	0.1627		1,294.143 6	1,294.143 6	0.0135	0.1921	1,351.716 2
Worker	0.9716	0.6996	8.5175	0.0243	2.9509	0.0147	2.9656	0.7826	0.0135	0.7961		2,455.615 8	2,455.615 8	0.0671	0.0687	2,477.766 7
Total	1.0759	3.6844	9.5405	0.0365	3.3800	0.0556	3.4357	0.9062	0.0527	0.9589		3,749.759 4	3,749.759 4	0.0806	0.2608	3,829.482 9

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	2.2852	20.8689	24.6488	0.0420		1.0046	1.0046		0.9594	0.9594		3,984.2227	3,984.2227	0.7218		4,002.2684
Total	2.2852	20.8689	24.6488	0.0420		1.0046	1.0046		0.9594	0.9594		3,984.2227	3,984.2227	0.7218		4,002.2684

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	0.0000	0.0000	0.0000	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	0.0699	2.3214	0.9316	0.0117	0.4291	0.0191	0.4483	0.1236	0.0183	0.1419		1,244.3964	1,244.3964	0.0124	0.1840	1,299.5505
Worker	0.9035	0.6180	7.8433	0.0235	2.9509	0.0138	2.9647	0.7826	0.0127	0.7953		2,377.1179	2,377.1179	0.0605	0.0634	2,397.5183
Total	0.9734	2.9394	8.7749	0.0353	3.3800	0.0329	3.4130	0.9062	0.0310	0.9372		3,621.5143	3,621.5143	0.0729	0.2474	3,697.0688

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	2.2852	20.8689	24.6488	0.0420		1.0046	1.0046		0.9594	0.9594	0.0000	3,984.2227	3,984.2227	0.7218		4,002.2684
Total	2.2852	20.8689	24.6488	0.0420		1.0046	1.0046		0.9594	0.9594	0.0000	3,984.2227	3,984.2227	0.7218		4,002.2684

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	0.0000	0.0000	0.0000	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	0.0699	2.3214	0.9316	0.0117	0.4291	0.0191	0.4483	0.1236	0.0183	0.1419		1,244.3964	1,244.3964	0.0124	0.1840	1,299.5505
Worker	0.9035	0.6180	7.8433	0.0235	2.9509	0.0138	2.9647	0.7826	0.0127	0.7953		2,377.1179	2,377.1179	0.0605	0.0634	2,397.5183
Total	0.9734	2.9394	8.7749	0.0353	3.3800	0.0329	3.4130	0.9062	0.0310	0.9372		3,621.5143	3,621.5143	0.0729	0.2474	3,697.0688

Vernola Market Place Appartment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1371	19.5140	24.5548	0.0420		0.8779	0.8779		0.8381	0.8381		3,984.7815	3,984.7815	0.7140		4,002.6308
Total	2.1371	19.5140	24.5548	0.0420		0.8779	0.8779		0.8381	0.8381		3,984.7815	3,984.7815	0.7140		4,002.6308

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	0.0688	2.3217	0.9212	0.0116	0.4291	0.0190	0.4481	0.1236	0.0182	0.1417		1,225.2388	1,225.2388	0.0129	0.1809	1,279.4763
Worker	0.8445	0.5502	7.3352	0.0228	2.9509	0.0132	2.9641	0.7826	0.0121	0.7947		2,301.8862	2,301.8862	0.0549	0.0589	2,320.8020
Total	0.9133	2.8719	8.2564	0.0343	3.3800	0.0322	3.4122	0.9062	0.0303	0.9365		3,527.1250	3,527.1250	0.0677	0.2398	3,600.2783

Vernola Market Place Appartment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1371	19.5140	24.5548	0.0420		0.8779	0.8779		0.8381	0.8381	0.0000	3,984.7815	3,984.7815	0.7140		4,002.6308
Total	2.1371	19.5140	24.5548	0.0420		0.8779	0.8779		0.8381	0.8381	0.0000	3,984.7815	3,984.7815	0.7140		4,002.6308

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	0.0688	2.3217	0.9212	0.0116	0.4291	0.0190	0.4481	0.1236	0.0182	0.1417		1,225.2388	1,225.2388	0.0129	0.1809	1,279.4763
Worker	0.8445	0.5502	7.3352	0.0228	2.9509	0.0132	2.9641	0.7826	0.0121	0.7947		2,301.8862	2,301.8862	0.0549	0.0589	2,320.8020
Total	0.9133	2.8719	8.2564	0.0343	3.3800	0.0322	3.4122	0.9062	0.0303	0.9365		3,527.1250	3,527.1250	0.0677	0.2398	3,600.2783

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.5201					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6229	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104

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	3.1200e-003	0.0891	0.0305	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.6312	38.6312	4.0000e-004	5.7300e-003	40.3497
Worker	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	0.0583	0.1289	0.5145	1.7400e-003	0.1805	2.0500e-003	0.1825	0.0482	1.9400e-003	0.0501		178.1548	178.1548	4.2100e-003	9.6300e-003	181.1319

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	0.5201					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6229	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4

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	3.1200e-003	0.0891	0.0305	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.6312	38.6312	4.0000e-004	5.7300e-003	40.3497
Worker	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	0.0583	0.1289	0.5145	1.7400e-003	0.1805	2.0500e-003	0.1825	0.0482	1.9400e-003	0.0501		178.1548	178.1548	4.2100e-003	9.6300e-003	181.1319

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 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					
Archit. Coating	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5454	3.7560	4.8363	7.9200e-003		0.2179	0.2179		0.2179	0.2179		750.5281	750.5281	0.0489		751.7497
Total	4.8195	3.7560	4.8363	7.9200e-003		0.2179	0.2179		0.2179	0.2179		750.5281	750.5281	0.0489		751.7497

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	0.1951	0.1404	1.7100	4.8800e-003	0.5924	2.9500e-003	0.5954	0.1571	2.7100e-003	0.1598		492.9835	492.9835	0.0135	0.0138	497.4304
Total	0.1951	0.1404	1.7100	4.8800e-003	0.5924	2.9500e-003	0.5954	0.1571	2.7100e-003	0.1598		492.9835	492.9835	0.0135	0.0138	497.4304

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 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					
Archit. Coating	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5454	3.7560	4.8363	7.9200e-003		0.2179	0.2179		0.2179	0.2179	0.0000	750.5281	750.5281	0.0489		751.7497
Total	4.8195	3.7560	4.8363	7.9200e-003		0.2179	0.2179		0.2179	0.2179	0.0000	750.5281	750.5281	0.0489		751.7497

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	0.1951	0.1404	1.7100	4.8800e-003	0.5924	2.9500e-003	0.5954	0.1571	2.7100e-003	0.1598		492.9835	492.9835	0.0135	0.0138	497.4304
Total	0.1951	0.1404	1.7100	4.8800e-003	0.5924	2.9500e-003	0.5954	0.1571	2.7100e-003	0.1598		492.9835	492.9835	0.0135	0.0138	497.4304

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5111	3.4747	4.8296	7.9200e-003		0.1889	0.1889		0.1889	0.1889		750.5281	750.5281	0.0449		751.6507
Total	4.7851	3.4747	4.8296	7.9200e-003		0.1889	0.1889		0.1889	0.1889		750.5281	750.5281	0.0449		751.6507

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	0.1814	0.1241	1.5746	4.7200e-003	0.5924	2.7700e-003	0.5952	0.1571	2.5500e-003	0.1597		477.2244	477.2244	0.0121	0.0127	481.3200
Total	0.1814	0.1241	1.5746	4.7200e-003	0.5924	2.7700e-003	0.5952	0.1571	2.5500e-003	0.1597		477.2244	477.2244	0.0121	0.0127	481.3200

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5111	3.4747	4.8296	7.9200e-003		0.1889	0.1889		0.1889	0.1889	0.0000	750.5281	750.5281	0.0449		751.6507
Total	4.7851	3.4747	4.8296	7.9200e-003		0.1889	0.1889		0.1889	0.1889	0.0000	750.5281	750.5281	0.0449		751.6507

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	0.1814	0.1241	1.5746	4.7200e-003	0.5924	2.7700e-003	0.5952	0.1571	2.5500e-003	0.1597		477.2244	477.2244	0.0121	0.0127	481.3200
Total	0.1814	0.1241	1.5746	4.7200e-003	0.5924	2.7700e-003	0.5952	0.1571	2.5500e-003	0.1597		477.2244	477.2244	0.0121	0.0127	481.3200

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4820	3.2501	4.8270	7.9200e-003		0.1624	0.1624		0.1624	0.1624		750.5281	750.5281	0.0423		751.5847
Total	4.7561	3.2501	4.8270	7.9200e-003		0.1624	0.1624		0.1624	0.1624		750.5281	750.5281	0.0423		751.5847

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	0.1696	0.1105	1.4726	4.5700e-003	0.5924	2.6400e-003	0.5951	0.1571	2.4300e-003	0.1595		462.1211	462.1211	0.0110	0.0118	465.9186
Total	0.1696	0.1105	1.4726	4.5700e-003	0.5924	2.6400e-003	0.5951	0.1571	2.4300e-003	0.1595		462.1211	462.1211	0.0110	0.0118	465.9186

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.2740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4820	3.2501	4.8270	7.9200e-003		0.1624	0.1624		0.1624	0.1624	0.0000	750.5281	750.5281	0.0423		751.5847
Total	4.7561	3.2501	4.8270	7.9200e-003		0.1624	0.1624		0.1624	0.1624	0.0000	750.5281	750.5281	0.0423		751.5847

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	0.1696	0.1105	1.4726	4.5700e-003	0.5924	2.6400e-003	0.5951	0.1571	2.4300e-003	0.1595		462.1211	462.1211	0.0110	0.0118	465.9186
Total	0.1696	0.1105	1.4726	4.5700e-003	0.5924	2.6400e-003	0.5951	0.1571	2.4300e-003	0.1595		462.1211	462.1211	0.0110	0.0118	465.9186

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	4.4937	7.3059	45.6898	0.1114	12.2243	0.0915	12.3157	3.2613	0.0857	3.3470		11,351.69 96	11,351.69 96	0.5962	0.5705	11,536.62 27
Unmitigated	4.4937	7.3059	45.6898	0.1114	12.2243	0.0915	12.3157	3.2613	0.0857	3.3470		11,351.69 96	11,351.69 96	0.5962	0.5705	11,536.62 27

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,522.56	1,693.12	1306.24	5,180,480	5,180,480
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,522.56	1,693.12	1,306.24	5,180,480	5,180,480

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Recreational Swimming Pool	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
NaturalGas Unmitigated	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081

Vernola Market Place Appartment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Apartments Low Rise	8619.7	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081

Vernola Market Place Appartment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	8.6197	0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0930	0.7944	0.3380	5.0700e-003		0.0642	0.0642		0.0642	0.0642		1,014.0820	1,014.0820	0.0194	0.0186	1,020.1081

6.0 Area Detail

6.1 Mitigation Measures Area

Vernola Market Place Apparment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034
Unmitigated	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034

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	0.5597					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5183	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952		30.9583	30.9583	0.0298		31.7034
Total	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034

Vernola Market Place Appartment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.5597					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5183	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952		30.9583	30.9583	0.0298		31.7034
Total	7.3968	0.1979	17.1807	9.1000e-004		0.0952	0.0952		0.0952	0.0952	0.0000	30.9583	30.9583	0.0298	0.0000	31.7034

7.0 Water Detail

7.1 Mitigation Measures Water

Vernola Market Place Appartment Community - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Vernola Market Place Apparment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Vernola Market Place Apparment Community
Riverside-South Coast County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	172.93	1000sqft	3.97	172,933.20	0
Other Non-Asphalt Surfaces	97.31	1000sqft	2.23	97,311.00	0
Recreational Swimming Pool	1.23	1000sqft	0.03	1,225.00	0
Apartments Low Rise	208.00	Dwelling Unit	2.51	313,895.00	595

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2024
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 Architectural Site Plan, include offsite improvements.

Construction Phase - Per Applicant

Off-road Equipment - Per Applicant, 8 hours per day.

Off-road Equipment - Per Applicant team; 8 hours per day

Off-road Equipment -

Trips and VMT - Two (2) daily water truck trips added to grading and paving activities per Rule 403. 0.80 mi. hauling trips per Applicant.

Grading - Per Engineer

Vehicle Trips - MFR Trip Rates per TIA. Swimming Pool Accounted for Under MFR

Vernola Market Place Apparment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Woodstoves - No Fireplaces assumed.

Energy Use - Added 0.35 lighting energy intensity to account for parking lot lighting.

Water And Wastewater - Per Landscape Plan

Sequestration - Per Landscape Plan

Construction Off-road Equipment Mitigation - 3 times - Per Rule 403

Waste Mitigation - Per CalRecycle

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	478.00
tblConstructionPhase	NumDays	230.00	521.00
tblConstructionPhase	NumDays	20.00	22.00
tblEnergyUse	LightingElect	0.00	0.35
tblEnergyUse	LightingElect	0.00	0.35
tblFireplaces	NumberGas	176.80	0.00
tblFireplaces	NumberNoFireplace	20.80	208.00
tblFireplaces	NumberWood	10.40	0.00
tblGrading	MaterialExported	0.00	49,000.00
tblLandUse	LandUseSquareFeet	172,930.00	172,933.20
tblLandUse	LandUseSquareFeet	97,310.00	97,311.00
tblLandUse	LandUseSquareFeet	1,230.00	1,225.00
tblLandUse	LandUseSquareFeet	208,000.00	313,895.00
tblLandUse	LotAcreage	13.00	2.51
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSequestration	NumberOfNewTrees	0.00	202.00
tblTripsAndVMT	HaulingTripLength	20.00	0.80

Vernola Market Place Apparment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	OutdoorWaterUseRate	8,543,675.71	1,616,208.00
tblWater	OutdoorWaterUseRate	44,586.30	0.00
tblWoodstoves	NumberCatalytic	10.40	0.00
tblWoodstoves	NumberNoncatalytic	10.40	0.00

2.0 Emissions Summary

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2119	1.3213	1.5835	3.4700e-003	0.2014	0.0582	0.2596	0.0705	0.0551	0.1255	0.0000	310.3123	310.3123	0.0406	0.0106	314.4762
2023	1.0623	3.5623	5.2414	0.0118	0.5080	0.1598	0.6678	0.1362	0.1536	0.2898	0.0000	1,049.3893	1,049.3893	0.1005	0.0308	1,061.0849
2024	0.7766	2.5225	3.8777	8.7600e-003	0.3829	0.1054	0.4883	0.1026	0.1013	0.2039	0.0000	781.2042	781.2042	0.0743	0.0225	789.7545
Maximum	1.0623	3.5623	5.2414	0.0118	0.5080	0.1598	0.6678	0.1362	0.1536	0.2898	0.0000	1,049.3893	1,049.3893	0.1005	0.0308	1,061.0849

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2119	1.3213	1.5835	3.4700e-003	0.1520	0.0582	0.2102	0.0472	0.0551	0.1023	0.0000	310.3121	310.3121	0.0406	0.0106	314.4760
2023	1.0623	3.5623	5.2414	0.0118	0.5080	0.1598	0.6678	0.1362	0.1536	0.2898	0.0000	1,049.3887	1,049.3887	0.1005	0.0308	1,061.0842
2024	0.7766	2.5225	3.8777	8.7600e-003	0.3829	0.1054	0.4883	0.1026	0.1013	0.2039	0.0000	781.2037	781.2037	0.0743	0.0225	789.7540
Maximum	1.0623	3.5623	5.2414	0.0118	0.5080	0.1598	0.6678	0.1362	0.1536	0.2898	0.0000	1,049.3887	1,049.3887	0.1005	0.0308	1,061.0842

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	4.52	0.00	3.49	7.52	0.00	3.76	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2022	11-30-2022	1.1054	1.1054
2	12-1-2022	2-28-2023	1.1800	1.1800
3	3-1-2023	5-31-2023	1.1690	1.1690
4	6-1-2023	8-31-2023	1.1681	1.1681
5	9-1-2023	11-30-2023	1.1572	1.1572
6	12-1-2023	2-29-2024	1.1171	1.1171
7	3-1-2024	5-31-2024	1.1061	1.1061
8	6-1-2024	8-31-2024	1.1052	1.1052
9	9-1-2024	9-30-2024	0.3604	0.3604
		Highest	1.1800	1.1800

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3201	0.0247	2.1476	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5106	3.5106	3.3800e-003	0.0000	3.5951
Energy	0.0170	0.1450	0.0617	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	338.4875	338.4875	0.0176	4.8200e-003	340.3653
Mobile	0.7407	1.1976	7.6949	0.0184	1.9593	0.0149	1.9742	0.5234	0.0140	0.5374	0.0000	1,704.7493	1,704.7493	0.0880	0.0848	1,732.2166
Waste						0.0000	0.0000		0.0000	0.0000	20.8451	0.0000	20.8451	1.2319	0.0000	51.6430
Water						0.0000	0.0000		0.0000	0.0000	4.3225	34.6470	38.9695	0.4469	0.0108	53.3713
Total	2.0777	1.3673	9.9042	0.0195	1.9593	0.0385	1.9978	0.5234	0.0376	0.5610	25.1677	2,081.3945	2,106.5621	1.7878	0.1005	2,181.1913

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3201	0.0247	2.1476	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5106	3.5106	3.3800e-003	0.0000	3.5951
Energy	0.0170	0.1450	0.0617	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	338.4875	338.4875	0.0176	4.8200e-003	340.3653
Mobile	0.7407	1.1976	7.6949	0.0184	1.9593	0.0149	1.9742	0.5234	0.0140	0.5374	0.0000	1,704.7493	1,704.7493	0.0880	0.0848	1,732.2166
Waste						0.0000	0.0000		0.0000	0.0000	13.1324	0.0000	13.1324	0.7761	0.0000	32.5351
Water						0.0000	0.0000		0.0000	0.0000	4.3225	34.6470	38.9695	0.4469	0.0108	53.3713
Total	2.0777	1.3673	9.9042	0.0195	1.9593	0.0385	1.9978	0.5234	0.0376	0.5610	17.4550	2,081.3945	2,098.8494	1.3320	0.1005	2,162.0834

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.65	0.00	0.37	25.50	0.00	0.88

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	143.0160
Total	143.0160

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2022	9/30/2022	5	22	
2	Building Construction	Building Construction	10/1/2022	9/30/2024	5	521	
3	Paving	Paving	10/1/2022	10/28/2022	5	20	
4	Architectural Coating	Architectural Coating	12/1/2022	9/30/2024	5	478	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 6.2

Residential Indoor: 635,637; Residential Outdoor: 211,879; Non-Residential Indoor: 600; Non-Residential Outdoor: 200; Striped Parking Area: 16,215 (Architectural Coating – sqft)

OffRoad Equipment

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	8.00	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	2	8.00	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
Grading	6	15.00	2.00	6,125.00	14.70	6.90	0.80	LD_Mix	HDT_Mix	HHDT
Building Construction	11	264.00	67.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	53.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Vernola Market Place Apparment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 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	tons/yr										MT/yr					
Fugitive Dust					0.0810	0.0000	0.0810	0.0381	0.0000	0.0381	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0214	0.2294	0.1680	3.3000e-004		0.0104	0.0104		9.5200e-003	9.5200e-003	0.0000	28.6602	28.6602	9.2700e-003	0.0000	28.8920
Total	0.0214	0.2294	0.1680	3.3000e-004	0.0810	0.0104	0.0914	0.0381	9.5200e-003	0.0477	0.0000	28.6602	28.6602	9.2700e-003	0.0000	28.8920

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.1000e-003	0.0798	0.0552	1.7000e-004	2.1800e-003	2.3000e-004	2.4000e-003	6.0000e-004	2.2000e-004	8.2000e-004	0.0000	15.9828	15.9828	2.6000e-004	2.5200e-003	16.7391
Vendor	3.0000e-005	9.8000e-004	3.3000e-004	0.0000	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.3853	0.3853	0.0000	6.0000e-005	0.4024
Worker	5.8000e-004	4.5000e-004	5.6100e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4248	1.4248	4.0000e-005	4.0000e-005	1.4376
Total	4.7100e-003	0.0812	0.0611	1.9000e-004	4.1300e-003	2.5000e-004	4.3700e-003	1.1200e-003	2.4000e-004	1.3600e-003	0.0000	17.7928	17.7928	3.0000e-004	2.6200e-003	18.5791

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 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	tons/yr										MT/yr					
Fugitive Dust					0.0316	0.0000	0.0316	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0214	0.2294	0.1680	3.3000e-004		0.0104	0.0104		9.5200e-003	9.5200e-003	0.0000	28.6602	28.6602	9.2700e-003	0.0000	28.8919
Total	0.0214	0.2294	0.1680	3.3000e-004	0.0316	0.0104	0.0419	0.0149	9.5200e-003	0.0244	0.0000	28.6602	28.6602	9.2700e-003	0.0000	28.8919

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.1000e-003	0.0798	0.0552	1.7000e-004	2.1800e-003	2.3000e-004	2.4000e-003	6.0000e-004	2.2000e-004	8.2000e-004	0.0000	15.9828	15.9828	2.6000e-004	2.5200e-003	16.7391
Vendor	3.0000e-005	9.8000e-004	3.3000e-004	0.0000	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.3853	0.3853	0.0000	6.0000e-005	0.4024
Worker	5.8000e-004	4.5000e-004	5.6100e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4248	1.4248	4.0000e-005	4.0000e-005	1.4376
Total	4.7100e-003	0.0812	0.0611	1.9000e-004	4.1300e-003	2.5000e-004	4.3700e-003	1.1200e-003	2.4000e-004	1.3600e-003	0.0000	17.7928	17.7928	3.0000e-004	2.6200e-003	18.5791

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	tons/yr										MT/yr					
Off-Road	0.0804	0.7353	0.8057	1.3600e-003		0.0377	0.0377		0.0360	0.0360	0.0000	117.4393	117.4393	0.0215	0.0000	117.9776
Total	0.0804	0.7353	0.8057	1.3600e-003		0.0377	0.0377		0.0360	0.0360	0.0000	117.4393	117.4393	0.0215	0.0000	117.9776

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4600e-003	0.0967	0.0326	4.0000e-004	0.0138	1.3300e-003	0.0151	3.9700e-003	1.2700e-003	5.2400e-003	0.0000	38.1318	38.1318	4.0000e-004	5.6600e-003	39.8281
Worker	0.0300	0.0234	0.2919	8.1000e-004	0.0943	4.8000e-004	0.0948	0.0250	4.4000e-004	0.0255	0.0000	74.0910	74.0910	1.9900e-003	2.0600e-003	74.7559
Total	0.0334	0.1200	0.3244	1.2100e-003	0.1081	1.8100e-003	0.1099	0.0290	1.7100e-003	0.0307	0.0000	112.2229	112.2229	2.3900e-003	7.7200e-003	114.5840

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	tons/yr										MT/yr					
Off-Road	0.0804	0.7353	0.8057	1.3600e-003		0.0377	0.0377		0.0360	0.0360	0.0000	117.4392	117.4392	0.0215	0.0000	117.9775
Total	0.0804	0.7353	0.8057	1.3600e-003		0.0377	0.0377		0.0360	0.0360	0.0000	117.4392	117.4392	0.0215	0.0000	117.9775

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4600e-003	0.0967	0.0326	4.0000e-004	0.0138	1.3300e-003	0.0151	3.9700e-003	1.2700e-003	5.2400e-003	0.0000	38.1318	38.1318	4.0000e-004	5.6600e-003	39.8281
Worker	0.0300	0.0234	0.2919	8.1000e-004	0.0943	4.8000e-004	0.0948	0.0250	4.4000e-004	0.0255	0.0000	74.0910	74.0910	1.9900e-003	2.0600e-003	74.7559
Total	0.0334	0.1200	0.3244	1.2100e-003	0.1081	1.8100e-003	0.1099	0.0290	1.7100e-003	0.0307	0.0000	112.2229	112.2229	2.3900e-003	7.7200e-003	114.5840

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2971	2.7130	3.2043	5.4600e-003		0.1306	0.1306		0.1247	0.1247	0.0000	469.8754	469.8754	0.0851	0.0000	472.0036
Total	0.2971	2.7130	3.2043	5.4600e-003		0.1306	0.1306		0.1247	0.1247	0.0000	469.8754	469.8754	0.0851	0.0000	472.0036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4400e-003	0.2986	0.1190	1.5200e-003	0.0550	2.4800e-003	0.0575	0.0159	2.3700e-003	0.0183	0.0000	146.5462	146.5462	1.4800e-003	0.0217	153.0406
Worker	0.1113	0.0825	1.0745	3.1300e-003	0.3772	1.7900e-003	0.3790	0.1002	1.6500e-003	0.1018	0.0000	286.8647	286.8647	7.1600e-003	7.6200e-003	289.3136
Total	0.1208	0.3811	1.1935	4.6500e-003	0.4323	4.2700e-003	0.4365	0.1161	4.0200e-003	0.1201	0.0000	433.4109	433.4109	8.6400e-003	0.0293	442.3542

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2971	2.7130	3.2043	5.4600e-003		0.1306	0.1306		0.1247	0.1247	0.0000	469.8748	469.8748	0.0851	0.0000	472.0030
Total	0.2971	2.7130	3.2043	5.4600e-003		0.1306	0.1306		0.1247	0.1247	0.0000	469.8748	469.8748	0.0851	0.0000	472.0030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4400e-003	0.2986	0.1190	1.5200e-003	0.0550	2.4800e-003	0.0575	0.0159	2.3700e-003	0.0183	0.0000	146.5462	146.5462	1.4800e-003	0.0217	153.0406
Worker	0.1113	0.0825	1.0745	3.1300e-003	0.3772	1.7900e-003	0.3790	0.1002	1.6500e-003	0.1018	0.0000	286.8647	286.8647	7.1600e-003	7.6200e-003	289.3136
Total	0.1208	0.3811	1.1935	4.6500e-003	0.4323	4.2700e-003	0.4365	0.1161	4.0200e-003	0.1201	0.0000	433.4109	433.4109	8.6400e-003	0.0293	442.3542

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2094	1.9124	2.4064	4.1200e-003		0.0860	0.0860		0.0821	0.0821	0.0000	354.2634	354.2634	0.0635	0.0000	355.8503
Total	0.2094	1.9124	2.4064	4.1200e-003		0.0860	0.0860		0.0821	0.0821	0.0000	354.2634	354.2634	0.0635	0.0000	355.8503

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-003	0.2251	0.0887	1.1300e-003	0.0415	1.8600e-003	0.0433	0.0120	1.7800e-003	0.0138	0.0000	108.7714	108.7714	1.1600e-003	0.0161	113.5859
Worker	0.0783	0.0553	0.7576	2.2800e-003	0.2844	1.2900e-003	0.2857	0.0755	1.1900e-003	0.0767	0.0000	209.4047	209.4047	4.9000e-003	5.3300e-003	211.1162
Total	0.0853	0.2805	0.8462	3.4100e-003	0.3259	3.1500e-003	0.3290	0.0875	2.9700e-003	0.0905	0.0000	318.1761	318.1761	6.0600e-003	0.0214	324.7021

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2094	1.9124	2.4064	4.1200e-003		0.0860	0.0860		0.0821	0.0821	0.0000	354.2630	354.2630	0.0635	0.0000	355.8499
Total	0.2094	1.9124	2.4064	4.1200e-003		0.0860	0.0860		0.0821	0.0821	0.0000	354.2630	354.2630	0.0635	0.0000	355.8499

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-003	0.2251	0.0887	1.1300e-003	0.0415	1.8600e-003	0.0433	0.0120	1.7800e-003	0.0138	0.0000	108.7714	108.7714	1.1600e-003	0.0161	113.5859
Worker	0.0783	0.0553	0.7576	2.2800e-003	0.2844	1.2900e-003	0.2857	0.0755	1.1900e-003	0.0767	0.0000	209.4047	209.4047	4.9000e-003	5.3300e-003	211.1162
Total	0.0853	0.2805	0.8462	3.4100e-003	0.3259	3.1500e-003	0.3290	0.0875	2.9700e-003	0.0905	0.0000	318.1761	318.1761	6.0600e-003	0.0214	324.7021

Vernola Market Place Apparment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 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	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	5.2000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0162	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	8.9000e-004	3.0000e-004	0.0000	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.3502	0.3502	0.0000	5.0000e-005	0.3658
Worker	5.2000e-004	4.1000e-004	5.1000e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2953	1.2953	3.0000e-005	4.0000e-005	1.3069
Total	5.5000e-004	1.3000e-003	5.4000e-003	1.0000e-005	1.7800e-003	2.0000e-005	1.8000e-003	4.8000e-004	2.0000e-005	5.0000e-004	0.0000	1.6455	1.6455	3.0000e-005	9.0000e-005	1.6727

Vernola Market Place Apparment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 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	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	5.2000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0162	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	8.9000e-004	3.0000e-004	0.0000	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.3502	0.3502	0.0000	5.0000e-005	0.3658
Worker	5.2000e-004	4.1000e-004	5.1000e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2953	1.2953	3.0000e-005	4.0000e-005	1.3069
Total	5.5000e-004	1.3000e-003	5.4000e-003	1.0000e-005	1.7800e-003	2.0000e-005	1.8000e-003	4.8000e-004	2.0000e-005	5.0000e-004	0.0000	1.6455	1.6455	3.0000e-005	9.0000e-005	1.6727

Vernola Market Place Apparment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.0470					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0000e-003	0.0413	0.0532	9.0000e-005		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	7.4895	7.4895	4.9000e-004	0.0000	7.5017
Total	0.0530	0.0413	0.0532	9.0000e-005		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	7.4895	7.4895	4.9000e-004	0.0000	7.5017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	1.5900e-003	0.0198	5.0000e-005	6.4100e-003	3.0000e-005	6.4400e-003	1.7000e-003	3.0000e-005	1.7300e-003	0.0000	5.0344	5.0344	1.4000e-004	1.4000e-004	5.0796
Total	2.0400e-003	1.5900e-003	0.0198	5.0000e-005	6.4100e-003	3.0000e-005	6.4400e-003	1.7000e-003	3.0000e-005	1.7300e-003	0.0000	5.0344	5.0344	1.4000e-004	1.4000e-004	5.0796

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.0470					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0000e-003	0.0413	0.0532	9.0000e-005		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	7.4895	7.4895	4.9000e-004	0.0000	7.5017
Total	0.0530	0.0413	0.0532	9.0000e-005		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	7.4895	7.4895	4.9000e-004	0.0000	7.5017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	1.5900e-003	0.0198	5.0000e-005	6.4100e-003	3.0000e-005	6.4400e-003	1.7000e-003	3.0000e-005	1.7300e-003	0.0000	5.0344	5.0344	1.4000e-004	1.4000e-004	5.0796
Total	2.0400e-003	1.5900e-003	0.0198	5.0000e-005	6.4100e-003	3.0000e-005	6.4400e-003	1.7000e-003	3.0000e-005	1.7300e-003	0.0000	5.0344	5.0344	1.4000e-004	1.4000e-004	5.0796

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	tons/yr										MT/yr					
Archit. Coating	0.5556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0664	0.4517	0.6279	1.0300e-003		0.0246	0.0246		0.0246	0.0246	0.0000	88.5128	88.5128	5.3000e-003	0.0000	88.6452
Total	0.6221	0.4517	0.6279	1.0300e-003		0.0246	0.0246		0.0246	0.0246	0.0000	88.5128	88.5128	5.3000e-003	0.0000	88.6452

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0224	0.0166	0.2157	6.3000e-004	0.0757	3.6000e-004	0.0761	0.0201	3.3000e-004	0.0204	0.0000	57.5903	57.5903	1.4400e-003	1.5300e-003	58.0819
Total	0.0224	0.0166	0.2157	6.3000e-004	0.0757	3.6000e-004	0.0761	0.0201	3.3000e-004	0.0204	0.0000	57.5903	57.5903	1.4400e-003	1.5300e-003	58.0819

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	tons/yr										MT/yr					
Archit. Coating	0.5556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0664	0.4517	0.6279	1.0300e-003		0.0246	0.0246		0.0246	0.0246	0.0000	88.5127	88.5127	5.3000e-003	0.0000	88.6451
Total	0.6221	0.4517	0.6279	1.0300e-003		0.0246	0.0246		0.0246	0.0246	0.0000	88.5127	88.5127	5.3000e-003	0.0000	88.6451

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0224	0.0166	0.2157	6.3000e-004	0.0757	3.6000e-004	0.0761	0.0201	3.3000e-004	0.0204	0.0000	57.5903	57.5903	1.4400e-003	1.5300e-003	58.0819
Total	0.0224	0.0166	0.2157	6.3000e-004	0.0757	3.6000e-004	0.0761	0.0201	3.3000e-004	0.0204	0.0000	57.5903	57.5903	1.4400e-003	1.5300e-003	58.0819

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0472	0.3185	0.4731	7.8000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	66.7250	66.7250	3.7600e-003	0.0000	66.8190
Total	0.4661	0.3185	0.4731	7.8000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	66.7250	66.7250	3.7600e-003	0.0000	66.8190

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0157	0.0111	0.1521	4.6000e-004	0.0571	2.6000e-004	0.0574	0.0152	2.4000e-004	0.0154	0.0000	42.0396	42.0396	9.8000e-004	1.0700e-003	42.3832
Total	0.0157	0.0111	0.1521	4.6000e-004	0.0571	2.6000e-004	0.0574	0.0152	2.4000e-004	0.0154	0.0000	42.0396	42.0396	9.8000e-004	1.0700e-003	42.3832

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0472	0.3185	0.4731	7.8000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	66.7250	66.7250	3.7600e-003	0.0000	66.8189
Total	0.4661	0.3185	0.4731	7.8000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	66.7250	66.7250	3.7600e-003	0.0000	66.8189

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0157	0.0111	0.1521	4.6000e-004	0.0571	2.6000e-004	0.0574	0.0152	2.4000e-004	0.0154	0.0000	42.0396	42.0396	9.8000e-004	1.0700e-003	42.3832
Total	0.0157	0.0111	0.1521	4.6000e-004	0.0571	2.6000e-004	0.0574	0.0152	2.4000e-004	0.0154	0.0000	42.0396	42.0396	9.8000e-004	1.0700e-003	42.3832

Vernola Market Place Apparment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7407	1.1976	7.6949	0.0184	1.9593	0.0149	1.9742	0.5234	0.0140	0.5374	0.0000	1,704.749 3	1,704.749 3	0.0880	0.0848	1,732.216 6
Unmitigated	0.7407	1.1976	7.6949	0.0184	1.9593	0.0149	1.9742	0.5234	0.0140	0.5374	0.0000	1,704.749 3	1,704.749 3	0.0880	0.0848	1,732.216 6

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,522.56	1,693.12	1306.24	5,180,480	5,180,480
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,522.56	1,693.12	1,306.24	5,180,480	5,180,480

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Recreational Swimming Pool	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	170.5949	170.5949	0.0144	1.7500e-003	171.4750
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	170.5949	170.5949	0.0144	1.7500e-003	171.4750
NaturalGas Mitigated	0.0170	0.1450	0.0617	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8926	167.8926	3.2200e-003	3.0800e-003	168.8903
NaturalGas Unmitigated	0.0170	0.1450	0.0617	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8926	167.8926	3.2200e-003	3.0800e-003	168.8903

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.14619e+006	0.0170	0.1450	0.0617	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8926	167.8926	3.2200e-003	3.0800e-003	168.8903
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0170	0.1450	0.0617	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8926	167.8926	3.2200e-003	3.0800e-003	168.8903

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.14619e+006	0.0170	0.1450	0.0617	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8926	167.8926	3.2200e-003	3.0800e-003	168.8903
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0170	0.1450	0.0617	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.8926	167.8926	3.2200e-003	3.0800e-003	168.8903

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	867350	153.8206	0.0130	1.5700e-003	154.6141
Other Asphalt Surfaces	60526.6	10.7341	9.1000e-004	1.1000e-004	10.7895
Other Non-Asphalt Surfaces	34058.8	6.0402	5.1000e-004	6.0000e-005	6.0714
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		170.5949	0.0144	1.7400e-003	171.4750

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	867350	153.8206	0.0130	1.5700e-003	154.6141
Other Asphalt Surfaces	60526.6	10.7341	9.1000e-004	1.1000e-004	10.7895
Other Non-Asphalt Surfaces	34058.8	6.0402	5.1000e-004	6.0000e-005	6.0714
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		170.5949	0.0144	1.7400e-003	171.4750

6.0 Area Detail

6.1 Mitigation Measures Area

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3201	0.0247	2.1476	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5106	3.5106	3.3800e-003	0.0000	3.5951
Unmitigated	1.3201	0.0247	2.1476	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5106	3.5106	3.3800e-003	0.0000	3.5951

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1022					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1532					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0648	0.0247	2.1476	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5106	3.5106	3.3800e-003	0.0000	3.5951
Total	1.3201	0.0247	2.1476	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5106	3.5106	3.3800e-003	0.0000	3.5951

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1022					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1532					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0648	0.0247	2.1476	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5106	3.5106	3.3800e-003	0.0000	3.5951
Total	1.3201	0.0247	2.1476	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5106	3.5106	3.3800e-003	0.0000	3.5951

7.0 Water Detail

7.1 Mitigation Measures Water

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	38.9695	0.4469	0.0108	53.3713
Unmitigated	38.9695	0.4469	0.0108	53.3713

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.552 / 1.61621	38.7785	0.4445	0.0108	53.1034
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0727461 / 0	0.1911	2.3800e-003	6.0000e-005	0.2679
Total		38.9695	0.4469	0.0108	53.3713

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.552 / 1.61621	38.7785	0.4445	0.0108	53.1034
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0727461 / 0	0.1911	2.3800e-003	6.0000e-005	0.2679
Total		38.9695	0.4469	0.0108	53.3713

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.1324	0.7761	0.0000	32.5351
Unmitigated	20.8451	1.2319	0.0000	51.6430

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	95.68	19.4222	1.1478	0.0000	48.1176
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	7.01	1.4230	0.0841	0.0000	3.5253
Total		20.8452	1.2319	0.0000	51.6430

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	60.2784	12.2360	0.7231	0.0000	30.3141
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	4.4163	0.8965	0.0530	0.0000	2.2210
Total		13.1324	0.7761	0.0000	32.5351

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Vernola Market Place Appartment Community - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number
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11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	143.0160	0.0000	0.0000	143.0160

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	202	143.0160	0.0000	0.0000	143.0160
Total		143.0160	0.0000	0.0000	143.0160

ENERGY CALCULATIONS

Table 1 – Total Construction-Related Fuel Consumption

VMAC Phase B Project

Fuel	Consumption	
Diesel		
On-Road Construction Trips ¹	42,815	Gallons
Off-Road Construction Equipment ²	108,089	Gallons
Diesel Total	150,904	Gallons
Gasoline		
On-Road Construction Trips ¹	82,644	Gallons
Off-Road Construction Equipment ³	-	Gallons
Gasoline Total	82,644	Gallons

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod for construction in 2022 and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data for Riverside County. See Table 2 for calculation details.
2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
3. All emissions from off-road construction equipment were assumed to be diesel.

Table 2 – On-Road Construction Trip Estimates

VMAC Phase B Project

Trip Type	Trips	Trip length	Vehicle Miles Traveled (VMT)	Fuel Efficiency	Annual Fuel Usage ¹	
	(trips)	(miles)	(miles)	(mpg)	(Fuel)	(gallon)
Worker ^{2,3}	163,508	14.7	2,403,568	28.4	Gasoline	82,644
Vendor ⁴	34,991	6.9	241,438	9.2	Diesel	27,719
Hauling ⁵	134,750	0.8	107,800	7.1	Diesel	15,096

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod output for construction and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data for 2022 in Riverside County.
2. Worker trips were assumed to be 100% gasoline powered vehicles.
3. Per CalEEMod, worker Trips were assumed to be 50% LDA, 25% LDT1, and 25% LDT2.
4. Vendor trips were assumed to be 50% MHDT and 50% HHDT, split evenly between the MHDT and HHDT construction categories.
5. Per CalEEMod, hauling trips were assumed to be 100% HHDT.

Table 3 – Annual Energy Consumption from Operation

VMAC Phase B Project

Fuel Type	Energy Consumption	Units	Natural Gas	Units
Electricity				
Building ¹	961,935	kWh/year	3,146,190	kBTU/yr
Water ²	195,364	kWh/year		
Total Electricity	1,157,300	kWh/year		
Mobile³				
Gasoline	160,693	gallons/year		
Diesel	25,860	gallons/year		

Notes:

1. Building electricity use from CalEEMod output.
2. Calculated based on the Project's annual water consumption from Conceptual Landscape Plan and CalEEMod defaults using CalEEMod SCAQMD energy intensity of 0.0111 kWhr per gallon for supply, distribution, and treatment of water and .013021 kWhr per gallon for supply, distribution, and treatment of water and wastewater treatment.
3. Mobile source fuel use based on annual vehicle miles traveled (VMT) from CalEEMod output for operational year 2024 and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data in Riverside County.