

Appendix 4.1-1
Air Quality Assessment



Prepared by
Kimley»Horn
Expect More. Experience Better.



Air Quality Assessment
Artesia Place Project
(Artesia Boulevard Corridor Specific Plan Amendment)
City of Artesia, California



Expect More. Experience Better.

Prepared by:

Kimley-Horn and Associates, Inc.
1100 W. Town and Country Road, Suite 700
Orange, California 92868
Contact: Mr. Ace Malisos
714.939.1030

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LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADT	average daily traffic
AQMD	Air Quality Management District
CAAQS	California Ambient Air Quality Standards
CALGreen	California Green Building Standards
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
cy	cubic yards
DU	dwelling unit(s)
DPM	diesel particulate matter
FCAA	Federal Clean Air Act
H ₂ S	hydrogen sulfide
Pb	Lead
LST	localized significance threshold
µg/m ³	micrograms per cubic meter
mg/m ³	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
O ₃	Ozone
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	source receptor area
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SF	square feet or square foot
SO ₄₋₂	sulfates
SO ₂	sulfur dioxide
TAC	toxic air contaminant
U.S. EPA	Environmental Protection Agency
C ₂ H ₃ Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Artesia Place Project (Artesia Boulevard Corridor Specific Plan [ABCSP] Amendment) (Project). The purpose of this Air Quality Assessment is to identify the air quality emissions associated with Project construction and operations.

1.1 Project Location and Setting

The Project site is in the City of Artesia (City), approximately 14 miles southeast of downtown Los Angeles; see **Figure 1: Regional Vicinity Map**. The Project site consists of one approximately 3.3 acre parcel (Assessor Parcel Number [APN] 7035-016-064) located at 11709 Artesia Boulevard; see **Figure 2: Local Vicinity Map**. The Project site is generally bound by roadways, with Artesia Boulevard on the south, Alburto Avenue on the east, and Fallon Avenue on the west.

The Project site is at the northeast portion of the 21-acre ABCSP area, which extends along Artesia Boulevard, generally between Corby Avenue on the east and Gridley Road on the west. As shown in **Figure 3: Project Site Boundary Within ABCSP**, the Project site is at the eastern extent of ABCSP's Quadrant 2, which is comprised of approximately 6.0 acres located north of Artesia Boulevard between Alburto Avenue on the east and Roseton Avenue on the west. Two major freeways provide regional access to the Project site: Artesia Freeway (State Route 91 [SR-91]) to the north; and Interstate 605 (I-605) to the west. From SR-91, access to the Project site is provided via Pioneer Boulevard, which is east of the Project site. From I-605, access to the Project site is provided via Artesia Boulevard, which bisects the ABCSP area. Local access to the Project site is provided via Artesia Boulevard, which is a four-lane divided arterial roadway oriented east-west through the ABCSP area. Local access is also provided via Pioneer Boulevard, which is a four-lane arterial oriented north-south to the west of the Project site.

The City encompasses approximately 1.6 square miles in southeast Los Angeles County. The City is a suburban jurisdiction with a mix of residential densities, although low-density residential uses predominate. The City also contains a mix of retail commercial, office, and industrial uses.

The General Plan land use designation for the ABCSP area is Gateway Community Commercial, except for two parcels southeast of the Roseton Avenue at Artesia Boulevard intersection (within ABCSP's Quadrant 4), which are designated Low Density Residential.¹ The Gateway Community Commercial designation provides for a complementary mix of job-creating industrial, manufacturing uses, and local/regional-serving commercial retail and office uses.² The Low Density Residential designation, which is the City's predominant land use designation, is characterized by single-family, detached units.³

The Project site is in ABCSP Quadrant 2. Quadrant 2 is comprised of five parcels with four unique landowners. Quadrant 2 supports a variety of commercial, retail, and industrial uses. Existing uses include a Public Storage complex, a small industrial building, and a retail center that was redeveloped in 2004. The Project site comprises the eastern portion of Quadrant 2.

The Project site is currently vacant. California Dairies, Inc., a dairy manufacturing plant totaling approximately 27,290 gross square feet (GSF) occupied the Project site until it was demolished in 2022. All existing onsite utility connections remain capped and abandoned. The Project site is generally surrounded by residential, business park, commercial, and light industrial land uses.

¹ City of Artesia. (2010). *City of Artesia General Plan 2030*. Exhibit LU-3: General Plan 2030 Land Use. <http://www.cityofartesia.us/DocumentCenter/View/226/Artesia-General-Plan?bidId=>.

² City of Artesia. (2010). *City of Artesia General Plan 2030*. Land Use Sub-Element. Page LU-10. <http://www.cityofartesia.us/DocumentCenter/View/226/Artesia-General-Plan?bidId=>.

³ City of Artesia. (2010). *City of Artesia General Plan 2030*. Land Use Sub-Element. Page LU-9. <http://www.cityofartesia.us/DocumentCenter/View/226/Artesia-General-Plan?bidId=>.

1.2 Project Description

The Project proposes construction and operation of a mixed-use development comprised of 80 dwelling units (DU) and approximately 11,257 GSF of non-residential (commercial and office) land uses, as described below. To allow the proposed development, the Applicant proposes to amend the ABCSP. The proposed Zoning Code Text Amendment (Specific Plan Amendment) would amend the ABCSP to permit residential uses on the Project site, establish a maximum allowable development within the Project site, and amend the ABCSP's Design Standards and Guidelines (among other chapters). In addition to the Zoning Code Text Amendment, the Project seeks approval of the following entitlements: a General Plan Amendment; Design Review; Development Agreement; Vesting Tentative Tract Map No. 83834; and CEQA EIR certification.

The Project would construct a mixed-use development generally comprised of two portions – a commercial portion and a residential portion – connected by pedestrian walkways. **Figure 4: Conceptual Site Plan**, depicts the proposed land plan. In total, the Project proposes 80 DU and approximately 11,257 GSF of non-residential (commercial and office) land uses, including the components summarized in **Table 1: Project Development Summary** below:

Land Use	Residential (DU)	Non-Residential (GSF)			
		Office	Restaurant	Retail	Total
Townhomes	59				
Mixed-Use Carriage Townhomes (Commercial Ground Floor)	4		1,725	1,725	3,450
Shopkeeper Units (Commercial Condominiums with Townhomes above)	8		1,332	1,332	2,664
Commercial			1,350	1,350	2,700
Live/Work Townhomes	9	2,443			2,443
Total	80	2,443	4,407	4,407	11,257

DU = dwelling units; GSF = gross square feet

The following proposed land uses would be developed at a density of 23.2 dwelling units per acre (DU/AC) and floor area ratio (FAR) of 1.21:

- Townhomes: 10 buildings with 59 three-story townhome units.
- Mixed-Use Carriage Townhomes: One mixed-use building with approximately 3,450 GSF of commercial uses on the ground level and 4 carriage-type townhome units above;
- Shopkeeper Units: Two buildings with 8 commercial condominiums totaling approximately 2,664 GSF on the ground level and 8 townhome units above;
- Commercial: One building with approximately 2,700 GSF of commercial uses; and
- Live/Work Townhomes: Two buildings with approximately 2,443 GSF of office uses and 9 townhome units.

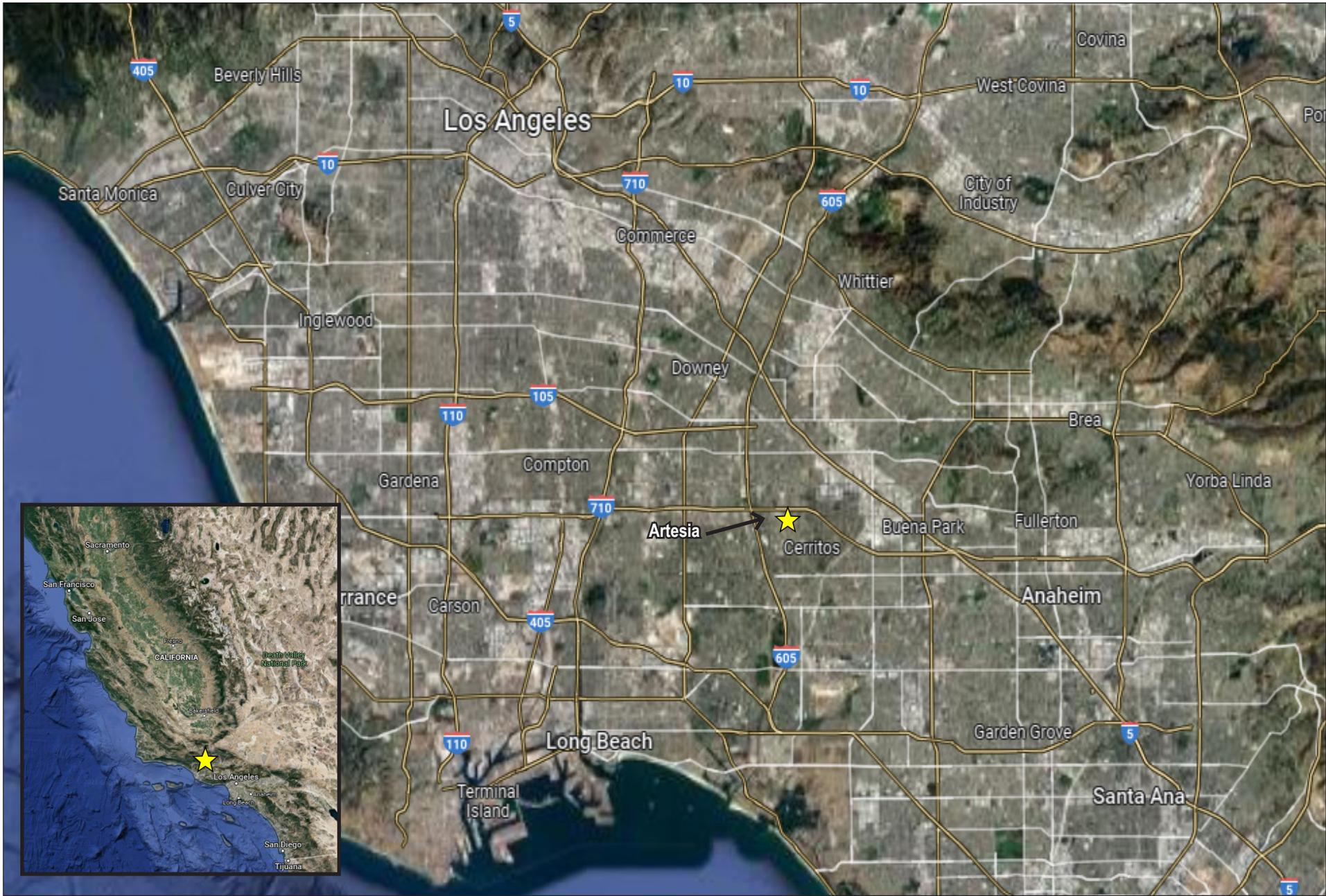


FIGURE 1: REGIONAL VICINITY MAP

Artesia Place Project (Artesia Boulevard Corridor Specific Plan Amendment)

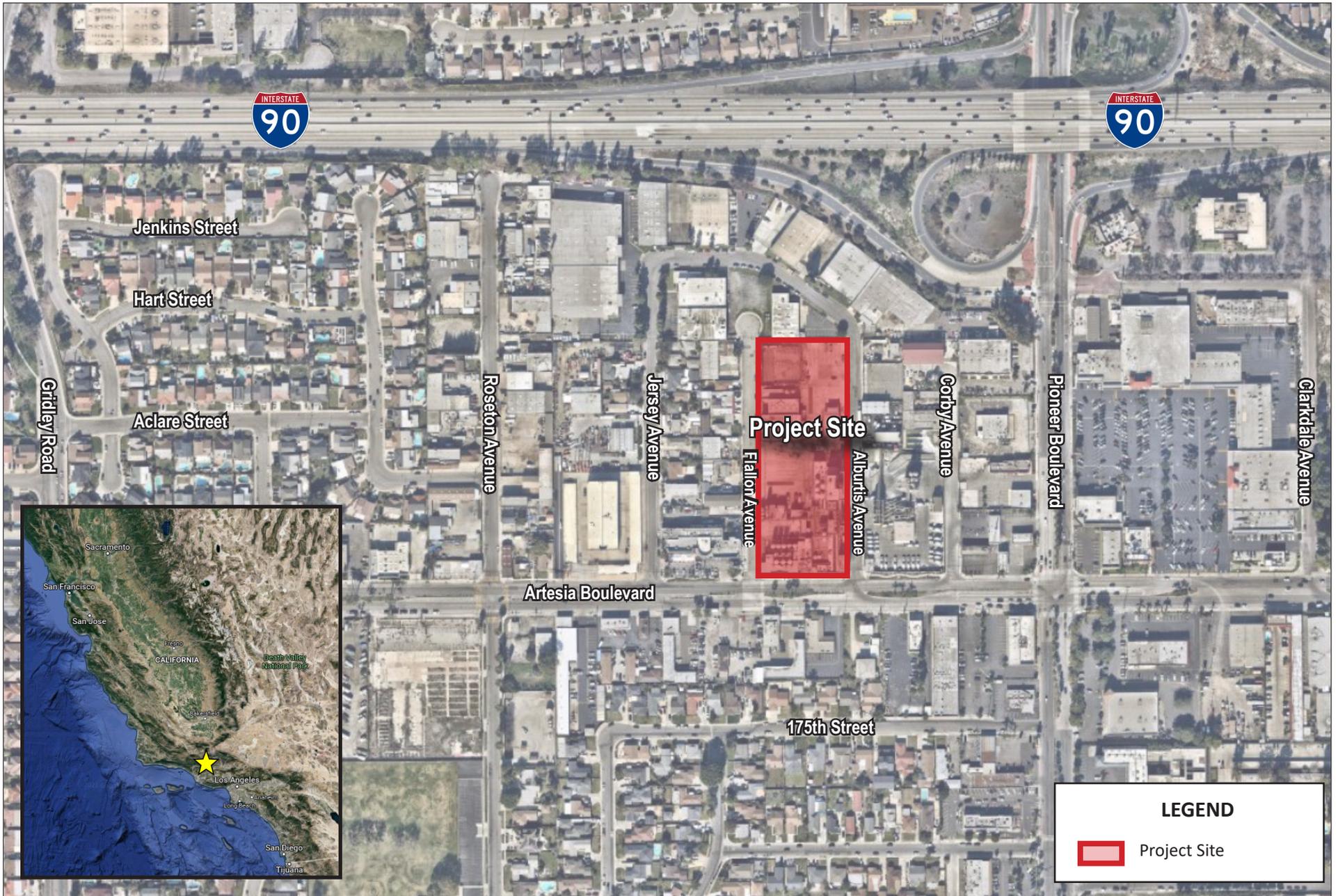


FIGURE 2: LOCAL VICINITY MAP

Artesia Place Project (Artesia Boulevard Corridor Specific Plan Amendment)

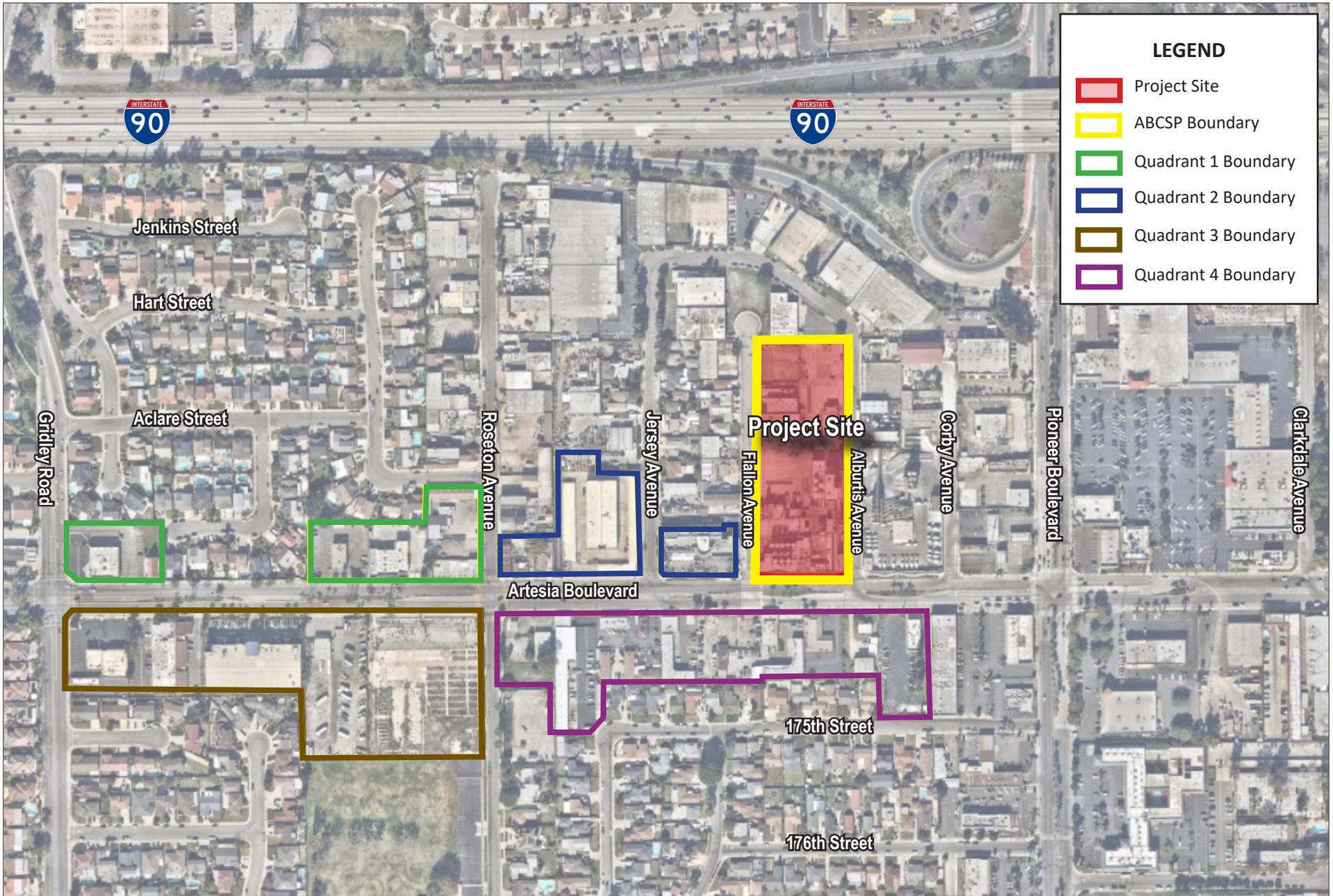
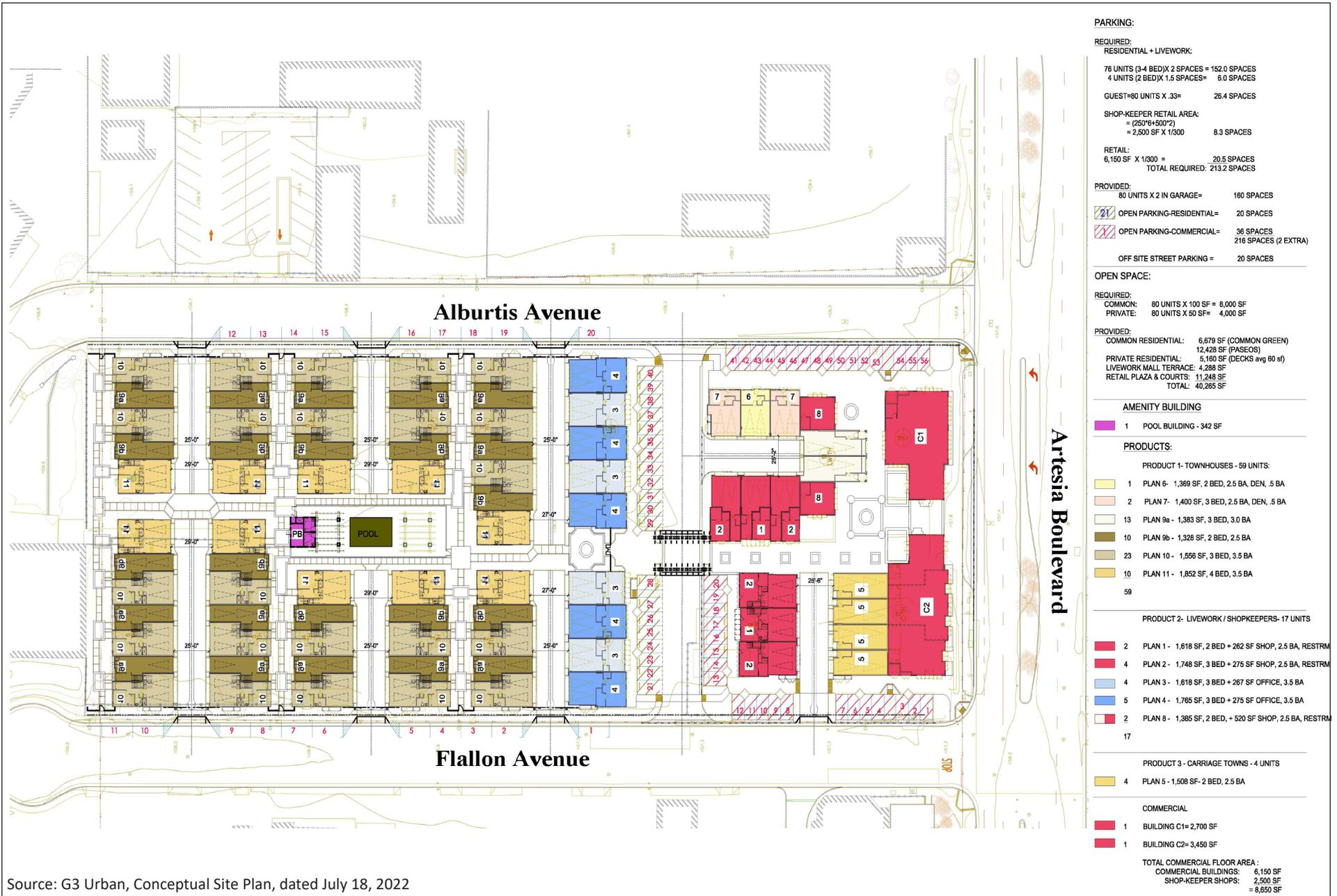


FIGURE 3: PROJECT SITE BOUNDARY WITHIN ABCSP

Artesia Place Project (Artesia Boulevard Corridor Specific Plan Amendment)



Source: G3 Urban, Conceptual Site Plan, dated July 18, 2022

FIGURE 4: CONCEPTUAL SITE PLAN

Artesia Place Project (Artesia Boulevard Corridor Specific Plan Amendment)

The Project is designed to be a mixed-use, pedestrian-oriented, and placemaking development with various commercial opportunities. The various buildings are linked by a central pedestrian walkway through a series of landscaped courtyards. The Project site is divided into two portions: the northern portion is bisected by the central pedestrian walkway, pool, and pool building and consists of traditional paseo rowtown-inspired residential clustering around a recreation area; and the southern portion fronting Artesia Boulevard consists of the urban commercial mixed-use buildings.

The Project site is designated Gateway Community Commercial.⁴ As noted above, Gateway Community Commercial designation provides for a complimentary mix of job-creating industrial and manufacturing uses, and local/regional-serving commercial retail and office uses. The City's Zoning Map classifies the Project site as Artesia Boulevard Corridor Specific Plan (ABCSP).⁵ The ABCSP establishes the City's vision for a 21-acre area along Artesia Boulevard, between Gridley Road and Pioneer Boulevard. For Quadrant 2 of the ABCSP area, the City's primary goal is to establish a retail, commercial, and industrial center.

⁴ City of Artesia. (2010). *City of Artesia General Plan 2030*. Exhibit LU-3: General Plan 2030 Land Use. [http://www.cityofartesia.us/DocumentCenter/View/226/Artesia-General-Plan?bidId=.](http://www.cityofartesia.us/DocumentCenter/View/226/Artesia-General-Plan?bidId=)

⁵ City of Artesia. (2019). *Zoning Map*. [https://www.cityofartesia.us/DocumentCenter/View/1877/Zoning-Map-January-7-2019?bidId=.](https://www.cityofartesia.us/DocumentCenter/View/1877/Zoning-Map-January-7-2019?bidId=)

2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project site is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bordered by the Pacific Ocean on the southwest and high mountains that form the remainder of the perimeter.⁶ Air quality in this area is determined by natural factors such as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout the 6,645-square-mile SCAB ranges from low 60 to high 80 degrees Fahrenheit with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although the SCAB has a semiarid climate, the air closer to the Earth's surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog are frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Wind patterns across the SCAB are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter. Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of the base of the inversion at any given time is called the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

⁶ South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

2.2 Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by State and federal laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_x), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead are primary air pollutants. Of these, CO, NO_x, SO₂, PM₁₀, and PM_{2.5} are primary criteria pollutants. ROG and NO_x are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O₃) is formed by a chemical reaction between ROG and NO_x in the presence of sunlight. O₃ and nitrogen dioxide (NO₂) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 2: Air Contaminants and Associated Public Health Concerns**.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e., chronic, carcinogenic or cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM ₁₀ and PM _{2.5})	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O ₃)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC) ¹ and nitrogen oxides (NO _x) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO ₂)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and

Pollutant	Major Man-Made Sources	Human Health Effects
	from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO ₂)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O ₃ . Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.
¹ Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association (CAPCOA), <i>Health Effects</i> , http://www.capcoa.org/health-effects/ . Accessed February 2022.		

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing ambient air quality levels, historical trends, and projections near the Project site are documented by measurements made by the South Coast Air Quality Management District (South Coast AQMD), the air pollution regulatory agency in the SCAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in the SCAB include O₃, PM₁₀, and PM_{2.5}. The air monitoring station nearest to the Project site that monitors ambient concentrations of these pollutants is the Compton-700 North Bullis Road Monitoring Station (located approximately 7.2 miles northwest of the Project site). Local air quality data for this Station from 2018 to 2020 are provided in **Table 3: Ambient Air Quality Data**, which lists the monitored maximum concentrations and number of exceedances of California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS) for each year.

Table 3: Ambient Air Quality Data			
Criteria Pollutant	2018	2019	2020
Ozone (O₃)¹			
1-hour Maximum Concentration (ppm)	0.075	0.100	0.152
8-hour Maximum Concentration (ppm)	0.063	0.079	0.085
<i>Number of Days Standard Exceeded</i>			
CAAQS 1-hour (>0.09 ppm)	0	1	3
NAAQS 8-hour (>0.070 ppm)	0	1	4
Carbon Monoxide (CO)²			
1-hour Maximum Concentration (ppm)	3.854	3.818	4.537
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO₂)¹			
1-hour Maximum Concentration (ppm)	0.0683	0.0700	0.0723
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-hour (>0.100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM₁₀)³			
National 24-hour Maximum Concentration	55.7	72.7	68.3
State 24-hour Maximum Concentration	55.7	73.8	68.7
State Annual Average Concentration (CAAQS=20 µg/m ³)	24.5	21.8	—
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>150 µg/m ³)	0	0	0
CAAQS 24-hour (>50 µg/m ³)	1	2	3
Particulate Matter Less Than 2.5 Microns (PM_{2.5})¹			
National 24-hour Maximum Concentration	49.4	39.5	67.5
State 24-hour Maximum Concentration	49.4	39.5	67.5
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>35 µg/m ³)	2	1	19
NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million. µg/m ³ = micrograms per cubic meter; — = not measured ¹ Measurements taken at the Compton-700 North Bullis Road Monitoring Station at 700 North Bullis Road, Compton, CA 90221 (CARB# 70112) ² Measurements taken at the Compton-700 North Bullis Road Monitoring Station at 700 North Bullis Road, Compton, CA 90221 (CARB# 70112), which is the closet monitoring station that measures CO. ³ Measurements taken at the South Long Beach Monitoring Station at 1305 E. Pacific Coast Hwy., Long Beach, CA 90744 (CARB# 70110)			
Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).			

2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. **Table 4: Sensitive Receptors** lists the sensitive receptors nearest the Project site, which are live-work units located approximately 62 feet to the west.

Table 4: Sensitive Receptors	
Receptor Description	Distance¹ and Direction from the Project Site
Single-family Residences	300 feet to the south
Live-Work Units	62 feet, Adjacent to the west
Single-family Residences	760 feet to the north
Luther Burbank Elementary School	1,010 feet to the southwest
1. Distances have been measured from the nearest Project Site boundary to the property line of each receptor.	
Source: Google Earth.	

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the U.S. States Environmental Protection Agency (U.S. EPA) developed the primary and secondary NAAQS for the criteria air pollutants including O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The U.S. EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the U.S. EPA is required to develop a federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The U.S. EPA has designated enforcement of air pollution control regulations to the individual states. Applicable NAAQS are summarized in **Table 5: State and Federal Ambient Air Quality Standards**.

3.2 State of California

California Air Resources Board

CARB administers the air quality policy in California. The CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS (**Table 5**), are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting NAAQS for the State of California. Like the U.S. EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment. The applicable CAAQS are summarized in **Table 5**.

Pollutant	Averaging Time	State Standards ¹	Federal Standards ²
Ozone (O ₃) ^{2,5,7}	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m ³)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	0.10 ppm ¹¹
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)
Sulfur Dioxide (SO ₂) ⁸	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m ³)

Particulate Matter (PM ₁₀) ^{1, 3, 6}	24-Hour	50 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	NA
Fine Particulate Matter (PM _{2.5}) ^{3, 4, 6, 9}	24-Hour	NA	35 µg/m ³
	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³
Sulfates (SO ₄₋₂)	24 Hour	25 µg/m ³	NA
Lead (Pb) ^{10, 11}	30-Day Average	1.5 µg/m ³	NA
	Calendar Quarter	NA	1.5 µg/m ³
	Rolling 3-Month Average	NA	0.15 µg/m ³
Hydrogen Sulfide (H ₂ S)	1 Hour	0.03 ppm (42 µg/m ³)	NA
Vinyl Chloride (C ₂ H ₃ Cl) ¹⁰	24 Hour	0.01 ppm (26 µg/m ³)	NA

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = no information available.

¹ California standards for O₃, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM₁₀, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

² National standards shown are the "primary standards" designed to protect public health. National standards other than for O₃, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O₃ standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O₃ standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.

³ Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM₁₀ is met if the 3-year average falls below the standard at every site. The annual PM_{2.5} standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the U.S. EPA at levels determined to be protective of public health with an adequate margin of safety.

⁴ On Oct. 1, 2015, the national 8-hour O₃ primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O₃ concentration per year, averaged over 3 years, is equal to or less than 0.070 ppm. The U.S. EPA will make recommendations on attainment designations by Oct. 1, 2016, and issue final designations Oct. 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard with attainment dates varying based on the O₃ level in the area.

⁵ The national 1-hour O₃ standard was revoked by the U.S. EPA on June 15, 2005.

⁶ In June 2002, CARB established new annual standards for PM_{2.5} and PM₁₀.

⁷ The 8-hour California O₃ standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

⁸ On June 2, 2010, the U.S. EPA established a new 1-hour SO₂ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO₂ NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO₂ NAAQS.

⁹ In December 2012, U.S. EPA strengthened the annual PM_{2.5} NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the U.S. EPA issued final area designations for the 2012 primary annual PM_{2.5} NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

¹⁰ CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

¹¹ National lead standards, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.

3.3 Regional

South Coast Air Quality Management District

The South Coast AQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. The agency's primary responsibility is ensuring that CAAQS and NAAQS are attained and maintained in the SCAB. The South Coast AQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to South Coast AQMD rules and regulations in effect at the time of construction.

The South Coast AQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the South Coast AQMD Governing Board on March 3, 2017. The purpose of the 2016 AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the South Coast AQMD's commitments towards meeting the NAAQS for 8-hour O_3 . The 2016 AQMP incorporates the latest scientific and technological information and planning assumptions, including SCAG's Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) [2020 RTP/SCS]) and updated emission inventory methodologies for various source categories.

On October 1, 2015, the U.S. EPA strengthened the NAAQS for ground-level O_3 . The 2022 AQMP, adopted by the South Coast AQMD Governing Board on December 2, 2022, was developed to address the requirements for meeting the 2015 8-hour O_3 standard. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes various additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NOX technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other FCAA measures to achieve the 2015 8-hour O_3 standard. The 2022 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2020-2045 RTP/SCS and updated emission inventory methodologies for various source categories.

The South Coast AQMD has published the *CEQA Air Quality Handbook* (approved by the South Coast AQMD Governing Board in 1993 and augmented with guidance for Localized Significance Thresholds [LST] in 2008). The South Coast AQMD guidance helps local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA) and provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the *CEQA Air Quality Handbook* and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The South Coast AQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The State and federal attainment status designations for the SCAB are summarized in **Table 6: South Coast Air Basin Attainment Status**. The SCAB is currently designated as a nonattainment area for CAAQS for O_3 , PM_{10} , and $PM_{2.5}$, as well as the NAAQS for 8-hour O_3 and $PM_{2.5}$. The SCAB is designated as attainment or unclassified for the remaining CAAQS and NAAQS.

Pollutant	State	Federal
Ozone (O ₃) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O ₃) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter (PM _{2.5}) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter (PM _{2.5}) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM ₁₀) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM ₁₀) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO ₂) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO ₂) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO ₂) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO ₂) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO ₄₋₂) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H ₂ S) (1 Hour Standard)	Unclassified	–

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2021.

The following is a list of South Coast AQMD rules that are required of construction activities associated with the Project:

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from

crossing any property line. This rule is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM₁₀ suppression techniques are summarized below.

- a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
 - b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
 - c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
 - d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
 - e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.
- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

3.4 Local

City of Artesia General Plan

The City of Artesia General Plan contains the following goals and policies that address air quality. The following apply to the Project:

Artesia General Plan, Sustainability Element

Community Policy SUS 3.1: *Adopt sustainable building measures for new municipal buildings and major renovations.*

Policy Action SUS 3.1.1 Educate municipal employees about sustainable building design and operations.

Policy Action SUS 3.1.2 Consider adopting green building standards for municipal buildings.

Community Policy SUS 3.2: *Strongly encourage the use of green building techniques in new construction and major renovations throughout the City.*

Policy Action SUS 3.2.1 Prioritize the development and implementation of an outreach and education program to promote green building practices by residents and businesses.

Policy Action SUS 3.2.2 Encourage and explore incentives or mandates for green building techniques in existing building retrofits as well as new buildings.

Community Policy SUS 3.3: *Achieve and maintain a mix of affordable, livable and green housing types throughout the City for people of all socio-economic, cultural, and household groups (including seniors, families, singles and disabled).*

Community Policy SUS 5.1: *Decrease vehicle miles traveled by increasing per vehicle ridership and decreasing the number of trips by autos and trucks.*

Policy Action SUS 5.1.2 Wherever possible, encourage opportunities for “park-once” habits for business patrons. Reduce current subsidies to auto commuting by reducing parking required for new transit-oriented or mixed-use developments—with convenient parking reserved for carpoolers, bicycles, customers and guests.

Community Policy SUS 5.2: *Decrease congestion on local and regional roadways to improve safety, reduce emissions and maintain mobility.*

Policy Action SUS 5.2.1 Prioritize development and implementation of a traffic signal synchronization and optimization program.

Community Policy SUS 6.2: *Protect and enhance environmental and public health by reducing or eliminating the use of hazardous and toxic materials; minimizing pollutants entering the air, soil, and water; and lessening the risks which environmental problems pose to human health and prosperity.*

Policy Action SUS 6.2.3 Develop protocol to ensure that no one geographic or socioeconomic group in the City is being unfairly affected by environmental pollution.

Policy Action SUS 6.2.5 Investigate the feasibility of requiring parking lots to incorporate landscaping plans with greenery that holds and filters stormwater runoff while also reducing the heat island effect and creating a comfortable and safe pedestrian environment.

Community Policy SUS 7.3: *Work with community and regional partners to reduce the number of unhealthy air quality days per year based on an established baseline.*

Policy Action SUS 7.3.1 Promote and participate in cooperative efforts with agencies and communities in the South Coast Air Basin to achieve clean air.

Policy Action SUS 7.3.2 Continue to implement the provisions of the Transportation Demand Management Ordinance.

Artesia Municipal Code

The Artesia Municipal Code establishes the following air quality provisions relative to the Project.

Section 5-1.03.17.v. The keeping or disposing of, or the scattering or accumulating of flammable, combustible or other materials including, but not limited to, composting, firewood, lumber, junk, trash, debris, packing boxes, pallets, plant cuttings, tree trimmings or wood chips, discarded items, or other personal property in interior or exterior areas of buildings or structures, when such items or accumulations.

(v) Cause, create, or tend to contribute to, an offensive odor.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds

Based upon the criteria derived from State CEQA Guidelines Appendix G, a Project normally would have a significant effect on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable state or federal ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

South Coast AQMD Thresholds

The significance criteria established by South Coast AQMD may be relied upon to make the above determinations. According to the South Coast AQMD, an air quality impact is considered significant if the Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The South Coast AQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in **Table 7: South Coast Air Quality Management District Emissions Thresholds**.

Criteria Air Pollutants and Precursors	Construction-Related	Operational-Related
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO _x)	100	55
Sulfur Oxides (SO _x)	150	150
Coarse Particulates (PM ₁₀)	150	150
Fine Particulates (PM _{2.5})	55	55

Source: South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds*.

Localized Carbon Monoxide

In addition to the daily thresholds listed above, the Project would also be subject to the CAAQS and NAAQS. These are addressed through an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Project site are above CAAQS and NAAQS (the more stringent California standards are 20 ppm for 1-hour and 9 ppm for 8-hour). The SCAB has been designated as attainment under the 1-hour and 8-hour CAAQS and NAAQS.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the South Coast AQMD developed LSTs for emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project site without expecting to cause or substantially contribute to an exceedance of the most stringent CAAQS or NAAQS. LSTs are based on the ambient concentrations of that pollutant within the project site's source receptor

area (SRA), as demarcated by the South Coast AQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The City of Artesia is located within South Coast AQMD SRA 4. **Table 8: Localized Significance Thresholds for Construction/Operations** shows the LSTs for a 1-acre, 2-acre, and 5-acre project in SRA 4. Because the nearest sensitive receptors are adjacent to the east Project site boundary, the thresholds for distances of 25 meters or less are listed below.

Project Site Size	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Coarse Particulates (PM ₁₀)	Fine Particulates (PM _{2.5})
1 Acre	57/57	585/585	4/1	3/1
2 Acres	82/82	842/842	7/2	4/1
5 Acres	123/123	1,530/1,530	14/4	8/2

Source: South Coast Air Quality Management District, *Localized Significance Threshold Methodology*, July 2008.

LSTs associated with all acreage categories are provided in **Table 8** for informational purposes. The table shows that the LSTs increase as acreages increase. It is noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based daily acreage disturbed. The operational LST acreage is based on the total area of the Project site. Although the Project site is greater than five acres, the 5-acre operational LSTs are conservatively used to evaluate the Project.

4.2 Methodology

This air quality impact analysis considers the Project's construction and operational impacts. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), which is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the South Coast AQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

Project operations would result in emissions of area sources (consumer products, architectural coating, and landscape equipment), energy sources (natural gas usage), mobile sources (motor vehicles from Project generated vehicle trips), and off-road equipment. Project-generated operational emissions would be predominantly associated with motor vehicle use. Emissions from each of these categories are discussed below.

- Area Sources.** Consumer products, on-site equipment, architectural coating, and landscaping that were previously not present on the site would generate area source emissions. Consumer products are various solvents used in non-industrial applications, which emit VOCs during product use, and typically include cleaning supplies, kitchen aerosols, cosmetics, and toiletries. It is noted that the default area source VOC emission factor developed for CalEEMod is based on a statewide factor. The CalEEMod default emissions rates were used.

- **Energy Sources.** Energy source emissions would be generated from Project electricity and natural gas usage. Primary uses of electricity and natural gas by the Project would be from space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. Energy source emissions were calculated in CalEEMod. No changes were made to the default energy usage consumption rates or emissions factors.
- **Mobile Sources.** Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_x, PM₁₀, and PM_{2.5} are all pollutants of regional concern. NO_x and ROG react with sunlight to form O₃, known as photochemical smog. Additionally, wind currents readily transport PM₁₀ and PM_{2.5}. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Traffic to be generated by the proposed Project was obtained from the Project's Local Transportation Assessment (Kimley-Horn, July 2022). Project trip generation is based on the following 11th Edition Institute of Transportation Engineers (ITE) land use categories:

- ITE Land Use 220: Multifamily Housing (Low-Rise) – 80 dwelling units, 539 total daily vehicle trips.
- ITE Land Use 712: Small Office Building – 2.443 thousand SF, 35 total daily vehicle trips.
- ITE Land Use 822: Strip Retail Plaza (<40k) – 4.407 thousand SF, 240 total daily vehicle trips.
- ITE Land Use 933: Fast-Food Restaurant without Drive-Through – 4.407 thousand SF, 1,985 total daily vehicle trips).

When incorporating pass-by trips and internal capture, the Project would generate 2,585 net daily trips. For the Air Quality Assessment, it was assumed the Mobile source emission rates in CalEEMod used the CARB SAFE Rule adjustment factors.⁷

As discussed above, the South Coast AQMD provides significance thresholds for emissions associated with project construction and operations. The proposed Project's construction and operational emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a project's impact on regional air quality.

The localized effects from the Project's on-site emissions were evaluated in accordance with the South Coast AQMD's LST methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable NAAQS or CAAQS and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

⁷ The U.S. EPA repealed SAFE Rule Part 1 on January 28, 2022. Therefore, the mobile source emissions in this analysis are conservative.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis

Threshold 5.1 Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Similar to a State Implementation Plan described above, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the CAAQS and NAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Project is located within the SCAB, which is under the jurisdiction of the South Coast AQMD. The South Coast AQMD is required, pursuant to the FCAA, to reduce criteria pollutant emissions for which the SCAB is in nonattainment. To reduce such emissions, the South Coast AQMD adopted the 2016 and 2022 AQMPs. The 2016 and 2022 AQMPs establish a program of rules and regulations directed at reducing air pollutant emissions and achieving CAAQS and NAAQS. The AQMPs are a regional and multi-agency effort including the South Coast AQMD, the CARB, the SCAG, and the U.S. EPA. The AQMPs pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project is subject to the AQMPs.

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

- **Consistency Criterion No. 1:** The Project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMPs.
- **Consistency Criterion No. 2:** The Project will not exceed the assumptions in the AQMPs or increments based on the years of the Project build-out phase.

According to the South Coast AQMD's *CEQA Air Quality Handbook*, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in **Table 9** and **Table 10** below, Project construction and operational emissions would not exceed CAAQS or NAAQS. Thus, the Project would be consistent with the first criterion.

Concerning Consistency Criterion No. 2, the 2016 and 2022 AQMPs contains air pollutant reduction strategies based on SCAG's latest growth forecasts, which were defined in consultation with local governments and with reference to local general plans. The Project site has a General Plan designation of Gateway Community Commercial and would require a General Plan Amendment to amend the text of the Land Use Sub-Element of the Community Development and Design Element, and specifically the Gateway Community Commercial land use designation description to permit integrated, mixed-use commercial and residential development to be considered and regulated with the adoption of specific plans. The City's Zoning Map classifies the Project site as Artesia Boulevard Corridor Specific Plan (ABCSP). Residential development is not permitted in Quadrant 2 of the ABCSP, which is where the Project is located. The Project requires a Zoning Code Text Amendment to amend the ABCSP to permit the proposed residential uses.

SCAG forecasts the City's population will grow to approximately 17,800 persons by 2045.⁸ The Project proposes 80 dwelling units, which is estimated to generate a population growth of approximately 270 persons.⁹ SCAG's forecast 2045 population considers the Project site's existing land use designation (i.e., Gateway Community Commercial). The Project proposes to amend the ABCSP Land Use Plan to include Quadrant 2a as Multiple Business Use and 2b (the Project site) as Mixed-Use to permit residential and other uses. However, the Project's forecast population growth would not cause SCAG's forecast 2045 population to be exceeded beyond what is accounted for in the 2016 AQMP and 2022 AQMPs.

The Project is estimated to generate approximately 30 jobs.¹⁰ SCAG forecasts the City's employees will grow to approximately 6,600 employees by 2045.¹¹ SCAG's forecast 2045 employees considers the Project site's existing land use designation (i.e., Gateway Community Commercial). The Project proposes to amend the ABCSP Land Use Plan to include Quadrant 2a as Multiple Business Use and 2b (the Project site) as Mixed-Use to permit residential and other uses. However, the Project's forecast employment generation would not cause SCAG's forecast 2045 population to be exceeded beyond what is accounted for in the 2016 and 2022 AQMPs.

As discussed above, the Project would not increase the frequency or severity of an existing air quality violation or cause or contribute to new violations for these pollutants. As the Project would not exceed any of the CAAQS and NAAQS, the Project would also not delay timely attainment of air quality standards or interim emission reductions specified in the 2016 and 2022 AQMPs. In addition, because the Project is consistent with growth projections that form the basis of the 2016 and 2022 AQMPs, the Project would be consistent with the emissions forecasts in the 2016 and 2022 AQMPs.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

Threshold 5.2 Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable state or federal ambient air quality standard?

Construction Emissions

Project construction activities would generate short-term criteria air pollutants emissions. Construction emissions are short-term and of temporary duration, lasting only as long as construction activities occur. Construction activities temporarily generate emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

Project construction activities are estimated to last approximately 24 months. Project construction emissions were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See **Appendix A: Air Quality Modeling Data** for more information regarding the construction assumptions

⁸ SCAG, Connect SoCal, *Demographics and Growth Forecast Technical Report*, September 2020, page 33.

⁹ State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2020-2022. Sacramento, California, May 2022, Based on the residential generation rate for multi-family housing units (3.38 persons/1 DU).

¹⁰ City of Artesia, *Artesia Boulevard Corridor Specific Plan IS/MND*, November 2011, which is based on the SCAG Employment Density Report Table II-B. Based on the employment generation rate for restaurant (1 employee / 424 square feet), retail (1 employee / 424 square feet), and office (1 employee / 319 square feet).

¹¹ SCAG, Connect SoCal, *Demographics and Growth Forecast Technical Report*, September 2020, page 37.

used in this analysis. The Project’s predicted maximum daily construction emissions are summarized in **Table 9: Construction Emissions**.

Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. South Coast AQMD Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.), are applicable to the Project and were applied in CalEEMod to minimize fugitive dust emissions.

Table 9: Construction-Related Emissions						
Construction Year	Emissions (Maximum Pounds Per Day)					
	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Unmitigated Emissions^{1,2}						
Year 2023	0.95	4.44	40.01	0.07	10.10	5.42
Year 2024	1.42	6.10	53.58	0.09	4.17	1.87
Year 2025	10.13	3.60	23.34	0.05	1.54	0.45
<i>South Coast AQMD Threshold</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Exceed South Coast AQMD Threshold?	No	No	No	No	No	No
ROG = Reactive Organic Gases; NO _x = Nitrogen Oxides; CO = Carbon Monoxide; SO ₂ = Sulfur Dioxide; PM ₁₀ = Particulate Matter 10 microns in diameter or less; PM _{2.5} = Particulate Matter 2.5 microns in diameter or less						
Notes: 1. South Coast AQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the South Coast AQMD CEQA Handbook (Tables XI-A through XI-E) were applied. Refer to Appendix A for Model Data Outputs. 2. The results of the Construction Health Risk Assessment (HRA) necessitated mitigation in the form of Tier 4 construction equipment. Preliminary unmitigated CalEEMod runs showed no air quality South Coast AQMD thresholds would be exceed. For maintaining consistency, the Tier 4 construction equipment was used as an assumption for the technical report and threshold exceedance.						
Source: CalEEMod version 2020.4.0. Refer to Appendix A: Air Quality Modeling Data for model outputs.						

As shown in the table, all Project criteria pollutant emissions would remain below their respective thresholds; therefore, Project construction impacts would be less than significant. Notwithstanding, the Project would be subject to compliance with South Coast AQMD Rules 402, 403, and 1113, previously described in the Regulatory Framework subsection, to further minimize construction impacts.

Operational Emissions

The Project’s operational emissions would be associated with area sources (e.g., landscape maintenance equipment, architectural coatings, off-road equipment, etc.), energy sources, mobile sources (i.e., motor vehicle use), and off-road equipment. Primary sources of operational criteria pollutants are from motor vehicle use and area sources. **Table 10: Operational Emissions** provides the Project’s estimated operational criteria pollutant emissions and indicates these emission levels would remain below South Coast AQMD significance thresholds. Therefore, the Project’s operational air pollutant emissions would be less than significant, and no mitigation is required.

Source	Emissions (Maximum Pounds Per Day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area Source Emissions	2.21	0.08	6.62	<0.01	0.04	0.04
Energy Emissions	0.069	0.60	0.35	<0.01	0.04	0.04
Mobile	6.06	5.32	52.50	0.11	11.88	3.22
Total Emissions	8.34	5.99	59.49	0.15	11.96	3.30
<i>South Coast AQMD Threshold</i>	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No
ROG = Reactive Organic Gases; NO _x = Nitrogen Oxides; CO = Carbon Monoxide; SO ₂ = Sulfur Dioxide; PM ₁₀ = Particulate Matter 10 microns in diameter or less; PM _{2.5} = Particulate Matter 2.5 microns in diameter or less						
Source: CalEEMod version 2020.4.0. Refer to Appendix A: Air Quality Modeling Data for model outputs.						

Cumulative Construction Emissions

The SCAB is designated nonattainment for CAAQS for O₃, PM₁₀, and PM_{2.5} and nonattainment for O₃ and PM_{2.5} for NAAQS. Appendix D of the South Coast AQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003) notes that projects that result in emissions that do not exceed the project-specific South Coast AQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. The mass-based regional significance thresholds published by the South Coast AQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected SCAB emissions. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, a project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable. As shown in **Table 9** above, Project construction-related emissions alone would not exceed the South Coast AQMD significance thresholds for criteria pollutants. Therefore, the proposed Project would not generate a cumulatively considerable contribution to air pollutant emissions during construction.

The South Coast AQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMPs pursuant to the FCAA mandates. The analysis assumed fugitive dust controls would be utilized during construction, including frequent water applications. South Coast AQMD rules, mandates, and compliance with adopted emissions control measures within the 2016 and 2022 AQMPs would also be imposed on construction projects throughout the SCAB, which would include related projects. Compliance with South Coast AQMD rules and regulations would further reduce the Project construction-related impacts. Therefore, Project-related construction emissions, combined with those from other projects in the area, would not substantially deteriorate local air quality. Construction emissions associated with the Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Operational Impacts

The South Coast AQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The South Coast AQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SCAB's

existing air quality conditions. Therefore, a project that exceeds the South Coast AQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in **Table 10**, the Project's operational emissions would not exceed the South Coast AQMD thresholds. As a result, operational emissions associated with the Project would not represent a cumulatively considerable contribution to significant cumulative air quality impacts. Therefore, cumulative operational impacts would be less than significant.

Standard Conditions and Requirements: Standard Conditions are existing requirements and standard conditions that are based on local, State, or federal regulations or laws that are frequently required independent of CEQA review. Typical standard conditions and requirements include compliance with the provisions of the Building Code, South Coast AQMD Rules, etc. The City may impose additional conditions during the approval process, as appropriate. Because Standard Conditions (SC) are neither project specific nor a result of development of the Project, they are not considered to be either Project Design Features or Mitigation Measures.

- SC AQ-1** Prior to the issuance of grading permits, the City Engineer shall confirm that the Grading Plan, Building Plans and Specifications require all construction contractors to comply with South Coast AQMD Rules 402 and 403 to minimize construction emissions of dust and particulates. The measures include, but are not limited to, the following:
- Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
 - All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
 - All material transported off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
 - The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
 - Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.
- SC AQ-2** Pursuant to South Coast AQMD Rule 1113, the Project Applicant shall require by contract specifications that the interior and exterior architectural coatings (paint and primer including parking lot paint) products used would have a volatile organic compound rating of 50 grams per liter or less.
- SC AQ-3** Require diesel powered construction equipment to turn off when not in use per Title 13 of the California Code of Regulations (CCR) Section 2449.
- SC AQ-4** Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls and sensors for landscaping according to the City's Water Efficient Landscape requirements (Artesia Municipal Code Article 15.5).
- SC AQ-5** The Project shall be designed in accordance with the applicable Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CCR, Part 6). These standards are updated, nominally every three years, to incorporate improved energy efficiency technologies and methods. The Building Official, or designee shall ensure compliance prior to the issuance of each building permit. The Title 24 Energy Efficiency Standards

(Section 110.10) require buildings to be designed to have 15 percent of the roof area “solar ready” that will structurally accommodate later installation of rooftop solar panels. If future building operators pursue providing rooftop solar panels, they will submit plans for solar panels prior to occupancy.

SC AQ-6

The Project shall be designed in accordance with the applicable California Green Building Standards (CALGreen) Code (24 CCR, Part 11). The Building Official, or designee shall ensure compliance prior to the issuance of each building permit. These requirements include, but are not limited to:

- Design buildings to be water-efficient. Install water-efficient fixtures in accordance with Section 4.303 (residential) and Section 5.303 (nonresidential) of the California Green Building Standards Code Part 11.
- Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 4.408.1 (residential) and Section 5.408.1 (nonresidential) of the California Green Building Standards Code Part 11.
- Provide storage areas for recyclables and green waste and adequate recycling containers located in readily accessible areas in accordance with Section 4.410 (residential) and Section 5.410 (nonresidential) of the California Green Building Standards Code Part 11.
- To facilitate future installation of electric vehicle supply equipment (EVSE), residential construction shall comply with Section 4.106.4 (residential electric vehicle charging) of the California Green Building Standards Code Part 11 and nonresidential construction shall comply with Section 5.106.5.3 (nonresidential electric vehicle charging) of the California Green Building Standards Code Part 11.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

Threshold 5.3 Would the Project expose sensitive receptors to substantial pollutant concentrations?**Localized Construction Significance Analysis**

The Project would develop 80 DUs and approximately 11,257 GSF of non-residential (commercial and office) land uses. Project construction is anticipated to occur over approximately 24 months, beginning September 2023 and ending August 2025. The nearest sensitive receptor to the construction site is a residential building adjacent to the eastern Project site boundary. To identify impacts to sensitive receptors, the South Coast AQMD recommends addressing LSTs for construction. LSTs were developed in response to South Coast AQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The South Coast AQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific emissions.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment the rates shown in **Table 11: Equipment-Specific Grading Rates** were used to determine the maximum daily disturbed acreage for comparison to LSTs.

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Grading	Tractors	3	1	8	1.0
	Graders	1	0.5	8	0.5
	Dozers	1	0.5	8	0.5
	Excavators	1	1	8	1.0
Total Acres Graded per Day					3.0

Source: CalEEMod version 2020.4.0. Refer to [Appendix A: Air Quality Modeling Data](#) for model outputs.

The South Coast AQMD’s methodology states that “off-site mobile emissions from the Project should not be included in the emissions compared to LSTs.” Therefore, only emissions included in the CalEEMod “on-site” emissions outputs were considered. The nearest sensitive receptor to the construction area is a residential building located adjacent to and east of the Project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. South Coast AQMD’s LST guidance recommends using the 25-meter threshold for receptors located 25 meters or less from a project site. Therefore, the LSTs for 5.0 acres at 25 meters were used for the construction analysis which is consistent with the South Coast AQMD LST methodology. **Table 12: Localized Significance of Construction Emissions** presents the results of localized emissions during each construction activity. **Table 12** shows that emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors.

Construction Activity	Emissions (Maximum Pounds Per Day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Site Preparation (2023)	2.02	20.87	7.18	3.94
Grading (2023)	0.36	1.57	2.44	1.34
Grading (2024)	0.36	1.57	2.44	1.34
Building Construction (2024)	0.33	17.46	0.04	0.04
Building Construction (2025)	0.33	17.46	0.04	0.04
Paving (2024)	0.27	13.53	0.03	0.03
Architectural Coating (2025)	9.42	1.83	<0.01	<0.01
<i>South Coast AQMD Localized Screening Threshold (5.0 acres at 25 meters)</i>	<i>123</i>	<i>1,530</i>	<i>14</i>	<i>8</i>
Exceed South Coast AQMD Threshold?	No	No	No	No

NO_x = Nitrogen Oxides; CO = Carbon Monoxide; PM₁₀ = Particulate Matter 10 microns in diameter or less; PM_{2.5} = Particulate Matter 2.5 microns in diameter or less

Source: CalEEMod version 2020.4.0. Refer to [Appendix A: Air Quality Modeling Data](#) for model outputs.

Localized Operational Significance Analysis

According to the South Coast AQMD LST methodology, operational LSTs apply to on-site sources. The 5-acre LST threshold was conservatively used for the Project. **Table 13: Localized Significance of Operational Emissions** shows that the maximum daily emissions of these pollutants during operations would not result in significant concentrations of pollutants at nearby sensitive receptors.

Activity	Emissions (Maximum Pounds Per Day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
On-Site Emissions	2.21	6.96	0.08	0.08
South Coast AQMD Localized Screening Threshold (5.0 acres at 25 meters)	123	1,530	4	2
Exceed South Coast AQMD Threshold?	No	No	No	No
NO _x = Nitrogen Oxides; CO = Carbon Monoxide; PM ₁₀ = Particulate Matter 10 microns in diameter or less; PM _{2.5} = Particulate Matter 2.5 microns in diameter or less				
Source: CalEEMod version 2020.4.0. Refer to Appendix A: Air Quality Modeling Data for model outputs.				

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The South Coast AQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the SCAB) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and South Coast AQMD Rule 1303 for new or modified sources. The NSR Program¹² was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based NAAQS. The NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the South Coast AQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

NO_x and ROG are precursor emissions that form ozone in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so O₃ may be formed at a distance downwind from the sources. Breathing ground-level ozone can result health effects that include: reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily ozone concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that ozone can make asthma symptoms worse and can increase sensitivity to asthma triggers.

According to the South Coast AQMD's 2016 and 2022 AQMPs, O₃, NO_x, and ROG have been decreasing in the SCAB since 1975 and are projected to continue to decrease in the future. Although vehicle miles traveled in the SCAB continue to increase, NO_x and ROG levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_x emissions from electric utilities have also decreased due to the use of cleaner fuels and renewable energy. The 2022 AQMP demonstrates how the South Coast AQMD's control strategy to meet the 2015 federal ozone standard by 2037 and would lead to sufficient NO_x emission reductions. In addition, since

¹² Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

NO_x emissions also lead to the formation of PM_{2.5}, the NO_x reductions needed to meet the ozone standards will likewise lead to improvement of PM_{2.5} levels and attainment of PM_{2.5} standards.

The South Coast AQMD's air quality modeling demonstrates that NO_x reductions prove to be much more effective in reducing ozone levels and will also lead to significant improvement in PM_{2.5} concentrations. NO_x-emitting stationary sources regulated by the South Coast AQMD include Regional Clean Air Incentives Market (RECLAIM) facilities (e.g., refineries, power plants, etc.), natural gas combustion equipment (e.g., boilers, heaters, engines, burners, flares) and other combustion sources that burn wood or propane. The 2016 and 2022 AQMPs identify robust NO_x reductions from new regulations on RECLAIM facilities, non-refinery flares, commercial cooking, and residential and commercial appliances. Such combustion sources are already heavily regulated with the lowest NO_x emissions levels achievable but there are opportunities to require and accelerate replacement with cleaner zero-emission alternatives, such as residential and commercial furnaces, pool heaters, and backup power equipment. The South Coast AQMD plans to achieve such replacements through a combination of regulations and incentives. Technology-forcing regulations can drive development and commercialization of clean technologies, with future year requirements for new or existing equipment. Incentives can then accelerate deployment and enhance public acceptability of new technologies.

As previously discussed, localized effects of on-site Project emissions on nearby receptors were found to be less than significant (refer to **Table 12** and **Table 13**). The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable State or federal ambient air quality standard. The LSTs were developed by the South Coast AQMD based on the ambient concentrations of that pollutant for each SRA and distance to the nearest sensitive receptor. The NAAQS and CAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations. However, as discussed above, neither the South Coast AQMD nor any other air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions. Information on health impacts related to exposure to ozone and particulate matter emissions published by the U.S. EPA and CARB have been summarized above and discussed in the Regulatory Framework section. Health studies are used by these agencies to set the NAAQS and CAAQS. Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the NAAQS and CAAQS, none of the health-related information can be directly correlated to the pounds/day or tons/year of emissions estimated from a single, proposed project. Because it is impracticable to accurately isolate the exact cause of a human disease (for example, the role a particular air pollutant plays compared to the role of other allergens and genetics in cause asthma), the City has determined that existing scientific tools cannot accurately estimate health impacts of the Project's air emissions without undue speculation. It should also be noted that this analysis identifies health concerns related to NO_x emissions. **Table 2** includes a list of criteria pollutants and summarizes common sources and effects. Thus, this analysis is reasonable and intended to foster informed decision making.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service of an intersection resulting from the Project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for

passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

The SCAB was re-designated as attainment in 2007 and is no longer addressed in the South Coast AQMD's AQMP. The 2003 AQMP is the most recent version that addresses CO concentrations. As part of the South Coast AQMD *CO Hotspot Analysis*, the Wilshire Boulevard and Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35-ppm federal standard. The Project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of South Coast AQMD's *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard and Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections resulting from the Project's 2,585 vehicle trips distributed throughout the roadway network. Therefore, impacts would be less than significant.

Construction-Related Diesel Particulate Matter

Project construction would result in the generation of DPM emissions from the use of required off-road diesel equipment. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. The California Office of Environmental Health Hazard Assessment (OEHHA) has not identified short-term health effects from DPM. Construction is temporary and would be transient throughout the Project site (i.e., move from location to location) and would not generate emissions in a fixed location for extended periods of time which would limit the exposure of any proximate individual sensitive receptor to TACs.

Additionally, construction is subject to and would comply with California regulations (e.g., CCR, Title 13, Sections 2485 and 2449), which reduce DPM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Given the temporary and intermittent nature of construction activities likely to occur within specific locations in the Project site (i.e., construction is not likely to occur in any one location for an extended time), the dose of DPM of any one receptor is exposed to would be limited. Therefore, considering the relatively short duration of DPM-emitting construction activity at any one location, and the highly dispersive properties of DPM, sensitive receptors would not be exposed to substantial concentrations of construction-related TAC emissions.

A Health Risk Assessment (HRA) (*Artesia Boulevard Corridor Specific Plan Amendment Health Risk Assessment*, prepared by Kimley-Horn, September 2022) was conducted based on the South Coast AQMD's *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*, the South Coast AQMD *Risk Assessment Procedures*, and the OEHHA guidance. Construction-related activities would result in Project-generated emissions of DPM

from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); building construction; paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

PM₁₀ exhaust construction emissions rates in grams per second were calculated from the total annual on-site exhaust emissions reported in CalEEMod during construction. Construction exhaust emissions over the entire construction period were used in AERMOD, a U.S. EPA-approved dispersion model, to approximate construction DPM emissions. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Uniform Cartesian receptors were used to evaluate the locations of the maximally exposed sensitive receptors. Surface and upper air meteorological data from the Compton-700 North Bullis Road Monitoring Station provided by the South Coast AQMD was selected as being the most representative meteorology. In addition, National Elevation Dataset (NED) terrain data was imported into AERMOD for the Project. The modeling and analysis were prepared in accordance with the South Coast AQMD Modeling Guidance for AERMOD.¹³

Risk levels were calculated based on the OEHHA guidance document, *Air Toxics Hot Spots Program Risk Assessment Guidelines* (February 2015). South Coast AQMD's threshold for cancer risk is ten in-one-million and the acute or chronic noncancer hazard index is one. Projects that do not exceed these thresholds would not result in a significant impact.

The HRA determined that the off-site construction health risk without the incorporation of mitigation would result in a maximum cancer risk of 33.71 in one million, which would exceed the South Coast AQMD threshold of 10 in one million. The Project would require implementation of mitigation measure (**MM HRA-1**), which requires the use of Tier 4 Final construction equipment. Implementation of **MM HRA-1** would reduce cancer risk to 2.25 in one million.

Acute and chronic impacts were also evaluated in the HRA. An acute or chronic hazard index of 1.0 is considered individually significant. The highest maximum chronic and acute hazard index at off-site receptors during construction would be 0.0014 and 0.0584, respectively. Construction risk levels would be below South Coast AQMD thresholds, and impacts would be less than significant. Refer to the Project HRA for analysis methodology, results, and model data.

Operational Diesel Particulate Matter

As noted above, a Project HRA was prepared and evaluated impacts from the SR-91 freeway to future potential receptors located on the Project site. Pursuant to *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, Case No. S213478, agencies are not required to analyze the CEQA impact of existing environmental conditions on a project's future users or residents, unless the proposed project risks exacerbate those environmental hazards or conditions that already exist. Nevertheless, the following mobile source health risk analysis has been prepared as an information item for land use decision making but is not a CEQA required analysis condition.

¹³ South Coast Air Quality Management District, *South Coast AQMD Modeling Guidance for AERMOD*, <http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance>, accessed September 2022.

The Project would place sensitive receptors within 1,000 feet of SR-91 (mobile TAC sources). Potential risks from traffic emissions generated along these roadways were evaluated using an analysis methodology that considers local traffic conditions, site-specific meteorology, and future exposures.

As with the evaluation of construction risk, air dispersion modeling for operations was performed using the U.S. EPA AERMOD dispersion model. The modeling and analysis were prepared in accordance with the South Coast AQMD Modeling Guidance for AERMOD.¹⁴ Freeway emissions were represented with line volume sources. AERMOD was run to obtain the peak 1-hour and annual average (period) concentration in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of PM_{10} and Total Organic Gases (TOG) at the Project site. Note that the concentration estimate developed using this methodology is considered conservative and is not a specific prediction of the actual concentrations that would occur at the Project site any one point in time. Actual 1-hour and annual average concentrations are dependent on many variables, particularly the number and type of vehicles traveling during time periods of adverse meteorology.

A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 30-year exposure scenario with CARB's Hotspot Analysis and Reporting Program Risk Assessment Standalone Tool (HARP 2) software. The cancer risk calculations were based on applying age sensitivity weighting factors for each emissions period modeled. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual. Only the risk associated with the worst-case residential and worker receptor locations of the Project were assessed.

The cancer and chronic health risks are based on the annual average concentration of PM_{10} (used as a proxy for DPM). As DPM does not have short-term toxicity values, acute risks were conservatively evaluated using hourly PM_{10} concentrations and the Reference Exposure Level (REL) for acrolein. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA *Human Health Evaluation Manual* (1991) and the OEHHA Guidance Manual.

Based on the AERMOD outputs, the highest expected annual average diesel PM_{10} emission concentrations from diesel truck traffic at the closest residential receptor on the Project site would be $0.02 \mu\text{g}/\text{m}^3$ during opening year. The CCR Title 24 Part 6 requires new development to use Minimum Efficiency Reporting Value (MERV) 13 air filtration on space conditioning systems and ventilation systems that provide outside air to the occupiable space of a dwelling. A MERV 13 air filtration system have an average particle size removal efficiency of approximately 75 percent for 0.3 to $1.0 \mu\text{g}/\text{m}^3$ (DPM) and 90 percent for 1.0 to $10 \mu\text{g}/\text{m}^3$ (PM_{10} and $\text{PM}_{2.5}$) based on ASHRAE Standard 52.2. The filters would be installed in residential units prior to occupancy, and maintenance with filters of the same value would be included in the Project's operation and maintenance manual. The Project's MERV 13 air filtration systems would reduce the highest expected annual average diesel PM_{10} emission concentrations conservatively by 75 percent to $0.0112 \mu\text{g}/\text{m}^3$ during the opening year. The highest expected hourly TOG emission concentrations from automobile traffic at the Project site would be $1.34 \mu\text{g}/\text{m}^3$ (no reduction was applied to TOG concentrations).

The Project HRA determined that the calculated carcinogenic risk at the Project site from DPM and TOG due to freeway emissions is 7.57 in one million for proposed on-site residents. The calculations conservatively assume no cleaner technology or lower emissions in future years. AERMOD was also used to determine emission concentrations from the concrete batch plant facility. The residential receptor on

¹⁴ South Coast Air Quality Management District, *South Coast AQMD Modeling Guidance for AERMOD*, <http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance>, accessed February 2022.

the Project site with the highest concentration of PM₁₀ from the concrete batch plant would be 0.0004 µg/m³ per year. Therefore, the carcinogenic risk associated with the Project would be less than significant.

Acute and chronic impacts were also evaluated in the HRA. An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index associated with both DPM and TOG emissions at the Project site would be 0.03 and 0.05, respectively. As a result, non-carcinogenic hazards are calculated to be within acceptable limits. Therefore, impacts would be less than significant.

The HRA determined that on-site receptors would not be exposed to TAC concentrations that would result in health risk impacts that exceed South Coast AQMD thresholds. It should be noted that Project operations would not generate TACs. Therefore, there would be no impact to off-site receptors.

Mitigation Measures:

MM HRA-1 Prior to issuance of grading permits, the Applicant shall prepare and submit documentation to the City of Artesia that demonstrate the following:

- All off-road diesel-powered construction equipment greater than 50 horsepower meets California Air Resources Board Tier 4 Final off-road emissions standards or incorporate CARB Level 3 Verified Diesel Emission Control Strategy (VDECS). Requirements for Tier 4 Final equipment shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's Best Available Control Technology (BACT) documentation (certified tier specification or model year specification), and CARB or South Coast AQMD operating permit (if applicable) shall be provided to the City at the time of mobilization of each applicable unit of equipment.
- Construction equipment shall be properly maintained according to manufacturer specifications.
- All construction equipment and delivery vehicles shall be turned off when not in use, or limit on-site idling for no more than 5 minutes in any 1 hour.
- On-site electrical hook ups to a power grid shall be provided for electric construction tools including saws, drills, and compressors, where feasible, to reduce the need for diesel powered electric generators.

Level of Significance: Less than significant impact with MM HRA-1 incorporated.

Threshold 5.4 Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

Odors that could be generated by construction activities are required to follow South Coast AQMD Rule 402 to prevent odor nuisances on sensitive land uses. South Coast AQMD Rule 402, Nuisance, states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

During construction-related activities, some odors (not substantial pollutant concentrations) that the public may detect are those typical of construction vehicles (e.g., diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact, which are typical of construction projects and disperse rapidly. Therefore, based on the significance thresholds, the Project's construction-related activities would have no impacts.

Operations

The South Coast AQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by the South Coast AQMD as odor sources. Therefore, the Project would not create objectionable odors.

Mitigation Measures: No mitigation is required.

Level of Significance: No impact.

6 REFERENCES

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7. City of Artesia, *Artesia General Plan*, 2010.
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17. South Coast Air Quality Management District, *The Multiple Air Toxics Exposure Study IV*, 2015.
18. United States Environmental Protection Agency, *National Ambient Air Quality Standards Table*, 2016.
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20. United States Environmental Protection Agency, *Policy Assessment for the Review of the Lead National Ambient Air Quality Standards*, 2013.

Appendix A

Air Quality Modeling Data

ABCSPA - Los Angeles-South Coast County, Summer

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

ABCSPA

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.44	1000sqft	0.06	2,443.00	0
Enclosed Parking Structure	160.00	Space	1.44	64,000.00	0
Parking Lot	56.00	Space	0.50	22,400.00	0
Fast Food Restaurant w/o Drive Thru	4.41	1000sqft	0.10	4,407.00	0
Apartments Low Rise	80.00	Dwelling Unit	5.00	80,000.00	229
Strip Mall	4.41	1000sqft	0.10	4,407.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2025
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 - Enclosed Parking Structure is for the 160 spaces in the apartment garages, and the parking lot is for the 56 open guest and commercial use spaces. The reduction of lot acreage for Residential to accommodate for multi-story buildings

Construction Phase - Based on client given construction schedule

Trips and VMT - Based on closest disposal site at California Waste Services. 621 W 152nd street

Grading - Based on site preparation at start and hardscape removal

Vehicle Trips - Daily trips based on Trip Generation values from Kimley-Horn traffic group. Low rise: $(539 - 12)/(80) = 6.59$ Fast food: $(1985 - 62 - 140)/(4.407) = 404.580$

ABCSPA - Los Angeles-South Coast County, Summer

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

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	43.00
tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	230.00	415.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	20.00	67.00
tblGrading	AcresOfGrading	87.00	20.00
tblGrading	AcresOfGrading	64.50	15.00
tblGrading	MaterialExported	0.00	2,442.60
tblLandUse	LandUseSquareFeet	2,440.00	2,443.00
tblLandUse	LandUseSquareFeet	4,410.00	4,407.00
tblLandUse	LandUseSquareFeet	4,410.00	4,407.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	WorkerTripNumber	20.00	15.00
tblVehicleTrips	ST_TR	8.14	6.59
tblVehicleTrips	ST_TR	696.00	404.58
tblVehicleTrips	ST_TR	2.21	14.39
tblVehicleTrips	ST_TR	42.04	54.45
tblVehicleTrips	SU_TR	6.28	6.59
tblVehicleTrips	SU_TR	500.00	404.58
tblVehicleTrips	SU_TR	0.70	14.39
tblVehicleTrips	SU_TR	20.43	54.45
tblVehicleTrips	WD_TR	7.32	6.59
tblVehicleTrips	WD_TR	346.23	404.58
tblVehicleTrips	WD_TR	9.74	14.39

ABCSPA - Los Angeles-South Coast County, Summer

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

tblVehicleTrips	WD_TR	44.32	54.45
tblWoodstoves	NumberCatalytic	4.00	0.00
tblWoodstoves	NumberNoncatalytic	4.00	0.00

2.0 Emissions Summary

ABCSPA - Los Angeles-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					
2023	4.4881	46.2680	34.3836	0.0743	25.1695	2.0478	27.2172	13.4320	1.8841	15.3162	0.0000	7,251.707 1	7,251.707 1	2.1499	0.0650	7,324.839 6
2024	4.4787	39.9642	47.8096	0.0924	7.8568	1.7495	9.6062	3.7621	1.6241	5.3862	0.0000	8,971.374 5	8,971.374 5	2.1469	0.0985	9,054.387 2
2025	11.2818	14.7832	21.9364	0.0454	1.4791	0.5912	2.0703	0.3959	0.5591	0.9550	0.0000	4,429.810 0	4,429.810 0	0.6575	0.0934	4,474.084 0
Maximum	11.2818	46.2680	47.8096	0.0924	25.1695	2.0478	27.2172	13.4320	1.8841	15.3162	0.0000	8,971.374 5	8,971.374 5	2.1499	0.0985	9,054.387 2

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.9465	4.3992	40.0103	0.0743	10.1012	0.1174	10.2185	5.3146	0.1170	5.4316	0.0000	7,251.707 1	7,251.707 1	2.1499	0.0650	7,324.839 6
2024	1.3745	5.9757	53.4077	0.0924	4.0346	0.1316	4.1661	1.7268	0.1307	1.8575	0.0000	8,971.374 5	8,971.374 5	2.1469	0.0985	9,054.387 2
2025	10.1011	3.5315	23.3353	0.0454	1.4791	0.0569	1.5360	0.3959	0.0561	0.4520	0.0000	4,429.810 0	4,429.810 0	0.6575	0.0934	4,474.084 0
Maximum	10.1011	5.9757	53.4077	0.0924	10.1012	0.1316	10.2185	5.3146	0.1307	5.4316	0.0000	8,971.374 5	8,971.374 5	2.1499	0.0985	9,054.387 2

ABCSPA - Los Angeles-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	38.65	86.23	-12.12	0.00	54.75	93.03	59.07	57.72	92.53	64.26	0.00	0.00	0.00	0.00	0.00	0.00

ABCSPA - Los Angeles-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	21.0137	1.4162	27.6930	0.0402		2.9490	2.9490		2.9490	2.9490	277.2224	1,451.9339	1,729.1563	0.0391	0.0509	1,745.2906
Energy	0.0685	0.6019	0.3728	3.7300e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144
Mobile	6.0580	5.3150	52.5049	0.1106	11.7967	0.0807	11.8774	3.1424	0.0750	3.2174		11,274.9250	11,274.9250	0.8172	0.4942	11,442.6170
Total	27.1401	7.3331	80.5707	0.1545	11.7967	3.0770	14.8738	3.1424	3.0713	6.2137	277.2224	13,473.7350	13,750.9574	0.8707	0.5587	13,939.2219

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	2.2099	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367	0.0000	11.9339	11.9339	0.0115	0.0000	12.2217
Energy	0.0685	0.6019	0.3728	3.7300e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144
Mobile	6.0580	5.3150	52.5049	0.1106	11.7967	0.0807	11.8774	3.1424	0.0750	3.2174		11,274.9250	11,274.9250	0.8172	0.4942	11,442.6170
Total	8.3364	5.9931	59.4947	0.1147	11.7967	0.1647	11.9614	3.1424	0.1589	3.3014	0.0000	12,033.7350	12,033.7350	0.8431	0.5079	12,206.1530

ABCSPA - Los Angeles-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	69.28	18.27	26.16	25.77	0.00	94.65	19.58	0.00	94.83	46.87	100.00	10.69	12.49	3.17	9.10	12.43

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2023	10/31/2023	5	43	
2	Grading	Grading	9/1/2023	1/1/2024	5	87	
3	Building Construction	Building Construction	1/1/2024	8/1/2025	5	415	
4	Paving	Paving	1/1/2024	2/1/2024	5	24	
5	Architectural Coating	Architectural Coating	5/1/2025	8/1/2025	5	67	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 1.94

Residential Indoor: 162,000; Residential Outdoor: 54,000; Non-Residential Indoor: 16,886; Non-Residential Outdoor: 5,629; Striped Parking Area: 5,184 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
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

ABCSPA - Los Angeles-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	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	242.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	98.00	25.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

ABCSPA - Los Angeles-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 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.4362	0.0000	18.4362	9.9706	0.0000	9.9706			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	2.6595	27.5242	18.2443	0.0381	18.4362	1.2660	19.7022	9.9706	1.1647	11.1354		3,687.308 1	3,687.308 1	1.1926		3,717.121 9

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	0.0122	0.7344	0.1960	3.2900e-003	0.0985	4.6300e-003	0.1031	0.0270	4.4300e-003	0.0314		361.6831	361.6831	0.0199	0.0574	379.2970
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	0.0576	0.0402	0.6505	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1100e-003	0.0545		180.0136	180.0136	4.5400e-003	4.1500e-003	181.3650
Total	0.0698	0.7745	0.8465	5.0700e-003	0.2997	5.8400e-003	0.3056	0.0804	5.5400e-003	0.0859		541.6967	541.6967	0.0245	0.0616	560.6620

ABCSPA - Los Angeles-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 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1901	0.0000	7.1901	3.8885	0.0000	3.8885			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	0.4656	2.0175	20.8690	0.0381	7.1901	0.0621	7.2522	3.8885	0.0621	3.9506	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9

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	0.0122	0.7344	0.1960	3.2900e-003	0.0985	4.6300e-003	0.1031	0.0270	4.4300e-003	0.0314		361.6831	361.6831	0.0199	0.0574	379.2970
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	0.0576	0.0402	0.6505	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1100e-003	0.0545		180.0136	180.0136	4.5400e-003	4.1500e-003	181.3650
Total	0.0698	0.7745	0.8465	5.0700e-003	0.2997	5.8400e-003	0.3056	0.0804	5.5400e-003	0.0859		541.6967	541.6967	0.0245	0.0616	560.6620

ABCSPA - Los Angeles-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 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2659	0.0000	6.2659	3.3366	0.0000	3.3366			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	1.7109	17.9359	14.7507	0.0297	6.2659	0.7749	7.0408	3.3366	0.7129	4.0495		2,872.6910	2,872.6910	0.9291		2,895.9182

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0480	0.0335	0.5421	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375
Total	0.0480	0.0335	0.5421	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375

ABCSPA - Los Angeles-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 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4437	0.0000	2.4437	1.3013	0.0000	1.3013			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	0.3632	1.5737	17.7527	0.0297	2.4437	0.0484	2.4921	1.3013	0.0484	1.3497	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0480	0.0335	0.5421	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375
Total	0.0480	0.0335	0.5421	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375

ABCSPA - Los Angeles-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 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2659	0.0000	6.2659	3.3366	0.0000	3.3366			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665		2,873.054 1	2,873.054 1	0.9292		2,896.284 2
Total	1.6617	17.0310	14.7594	0.0297	6.2659	0.7244	6.9903	3.3366	0.6665	4.0030		2,873.054 1	2,873.054 1	0.9292		2,896.284 2

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	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.7595	145.7595	3.4200e-003	3.2200e-003	146.8045
Total	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.7595	145.7595	3.4200e-003	3.2200e-003	146.8045

ABCSPA - Los Angeles-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 Grading - 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					
Fugitive Dust					2.4437	0.0000	2.4437	1.3013	0.0000	1.3013			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,873.054 1	2,873.054 1	0.9292		2,896.284 2
Total	0.3632	1.5737	17.7527	0.0297	2.4437	0.0484	2.4921	1.3013	0.0484	1.3497	0.0000	2,873.054 1	2,873.054 1	0.9292		2,896.284 2

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	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.7595	145.7595	3.4200e-003	3.2200e-003	146.8045
Total	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.7595	145.7595	3.4200e-003	3.2200e-003	146.8045

ABCSPA - Los Angeles-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 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

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	0.0279	0.9615	0.3638	4.5800e-003	0.1601	4.8600e-003	0.1650	0.0461	4.6400e-003	0.0508		493.1865	493.1865	0.0168	0.0710	514.7600
Worker	0.2922	0.1951	3.2911	9.4200e-003	1.0954	6.3100e-003	1.1017	0.2905	5.8100e-003	0.2963		952.2955	952.2955	0.0224	0.0210	959.1225
Total	0.3201	1.1567	3.6549	0.0140	1.2556	0.0112	1.2667	0.3366	0.0105	0.3471		1,445.4820	1,445.4820	0.0392	0.0920	1,473.8825

ABCSPA - Los Angeles-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 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	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

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	0.0279	0.9615	0.3638	4.5800e-003	0.1601	4.8600e-003	0.1650	0.0461	4.6400e-003	0.0508		493.1865	493.1865	0.0168	0.0710	514.7600
Worker	0.2922	0.1951	3.2911	9.4200e-003	1.0954	6.3100e-003	1.1017	0.2905	5.8100e-003	0.2963		952.2955	952.2955	0.0224	0.0210	959.1225
Total	0.3201	1.1567	3.6549	0.0140	1.2556	0.0112	1.2667	0.3366	0.0105	0.3471		1,445.4820	1,445.4820	0.0392	0.0920	1,473.8825

ABCSPA - Los Angeles-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 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0271	0.9570	0.3572	4.4900e-003	0.1601	4.8700e-003	0.1650	0.0461	4.6600e-003	0.0508		484.3072	484.3072	0.0170	0.0698	505.5176
Worker	0.2731	0.1752	3.0608	9.1000e-003	1.0954	6.0000e-003	1.1014	0.2905	5.5300e-003	0.2960		919.8548	919.8548	0.0202	0.0197	926.2133
Total	0.3003	1.1322	3.4180	0.0136	1.2556	0.0109	1.2664	0.3366	0.0102	0.3468		1,404.162 1	1,404.162 1	0.0371	0.0894	1,431.730 9

ABCSPA - Los Angeles-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 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0271	0.9570	0.3572	4.4900e-003	0.1601	4.8700e-003	0.1650	0.0461	4.6600e-003	0.0508		484.3072	484.3072	0.0170	0.0698	505.5176
Worker	0.2731	0.1752	3.0608	9.1000e-003	1.0954	6.0000e-003	1.1014	0.2905	5.5300e-003	0.2960		919.8548	919.8548	0.0202	0.0197	926.2133
Total	0.3003	1.1322	3.4180	0.0136	1.2556	0.0109	1.2664	0.3366	0.0102	0.3468		1,404.162 1	1,404.162 1	0.0371	0.0894	1,431.730 9

ABCSPA - Los Angeles-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 Paving - 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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9360	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039

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	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.7595	145.7595	3.4200e-003	3.2200e-003	146.8045
Total	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.7595	145.7595	3.4200e-003	3.2200e-003	146.8045

ABCSPA - Los Angeles-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 Paving - 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	0.2194	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2740	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

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	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.7595	145.7595	3.4200e-003	3.2200e-003	146.8045
Total	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.7595	145.7595	3.4200e-003	3.2200e-003	146.8045

ABCSPA - Los Angeles-South Coast County, Summer

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

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.3875					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	9.5584	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

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	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231

ABCSPA - Los Angeles-South Coast County, Summer

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

3.6 Architectural Coating - 2025

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	9.3875					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	9.4173	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319

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	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231

ABCSPA - Los Angeles-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	6.0580	5.3150	52.5049	0.1106	11.7967	0.0807	11.8774	3.1424	0.0750	3.2174		11,274.92 50	11,274.92 50	0.8172	0.4942	11,442.61 70
Unmitigated	6.0580	5.3150	52.5049	0.1106	11.7967	0.0807	11.8774	3.1424	0.0750	3.2174		11,274.92 50	11,274.92 50	0.8172	0.4942	11,442.61 70

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	527.20	527.20	527.20	1,801,522	1,801,522
Enclosed Parking Structure	0.00	0.00	0.00		
Fast Food Restaurant w/o Drive Thru	1,784.20	1,784.20	1,784.20	3,231,260	3,231,260
General Office Building	35.11	35.11	35.11	113,111	113,111
Parking Lot	0.00	0.00	0.00		
Strip Mall	240.12	240.12	240.12	456,860	456,860
Total	2,586.63	2,586.63	2,586.63	5,602,753	5,602,753

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

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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
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Enclosed Parking Structure	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Fast Food Restaurant w/o Drive Thru	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
General Office Building	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Parking Lot	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Strip Mall	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

ABCSPA - Los Angeles-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					
NaturalGas Mitigated	0.0685	0.6019	0.3728	3.7300e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144
NaturalGas Unmitigated	0.0685	0.6019	0.3728	3.7300e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144

ABCSPA - Los Angeles-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	3478.76	0.0375	0.3206	0.1364	2.0500e-003		0.0259	0.0259		0.0259	0.0259		409.2661	409.2661	7.8400e-003	7.5000e-003	411.6981
Enclosed Parking Structure	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
Fast Food Restaurant w/o Drive Thru	2781	0.0300	0.2727	0.2290	1.6400e-003		0.0207	0.0207		0.0207	0.0207		327.1763	327.1763	6.2700e-003	6.0000e-003	329.1205
General Office Building	69.0064	7.4000e-004	6.7700e-003	5.6800e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		8.1184	8.1184	1.6000e-004	1.5000e-004	8.1666
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	19.6806	2.1000e-004	1.9300e-003	1.6200e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		2.3154	2.3154	4.0000e-005	4.0000e-005	2.3291
Total		0.0685	0.6019	0.3727	3.7400e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144

ABCSPA - Los Angeles-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	3.47876	0.0375	0.3206	0.1364	2.0500e-003		0.0259	0.0259		0.0259	0.0259		409.2661	409.2661	7.8400e-003	7.5000e-003	411.6981
Enclosed Parking Structure	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
Fast Food Restaurant w/o Drive Thru	2.781	0.0300	0.2727	0.2290	1.6400e-003		0.0207	0.0207		0.0207	0.0207		327.1763	327.1763	6.2700e-003	6.0000e-003	329.1205
General Office Building	0.0690064	7.4000e-004	6.7700e-003	5.6800e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		8.1184	8.1184	1.6000e-004	1.5000e-004	8.1666
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0196806	2.1000e-004	1.9300e-003	1.6200e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		2.3154	2.3154	4.0000e-005	4.0000e-005	2.3291
Total		0.0685	0.6019	0.3727	3.7400e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

ABCSPA - Los Angeles-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	2.2099	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367	0.0000	11.9339	11.9339	0.0115	0.0000	12.2217
Unmitigated	21.0137	1.4162	27.6930	0.0402		2.9490	2.9490		2.9490	2.9490	277.2224	1,451.9339	1,729.1563	0.0391	0.0509	1,745.2906

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	0.1723					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	18.8037	1.3400	21.0760	0.0398		2.9124	2.9124		2.9124	2.9124	277.2224	1,440.0000	1,717.2224	0.0276	0.0509	1,733.0689
Landscaping	0.2001	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367		11.9339	11.9339	0.0115		12.2217
Total	21.0137	1.4162	27.6930	0.0402		2.9490	2.9490		2.9490	2.9490	277.2224	1,451.9339	1,729.1563	0.0391	0.0509	1,745.2906

ABCSPA - Los Angeles-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	0.1723					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8375					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	0.2001	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367		11.9339	11.9339	0.0115		12.2217
Total	2.2099	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367	0.0000	11.9339	11.9339	0.0115	0.0000	12.2217

7.0 Water Detail

7.1 Mitigation Measures Water

ABCSPA - Los Angeles-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

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

ABCSPA - Los Angeles-South Coast County, Winter

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

ABCSPA

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.44	1000sqft	0.06	2,443.00	0
Enclosed Parking Structure	160.00	Space	1.44	64,000.00	0
Parking Lot	56.00	Space	0.50	22,400.00	0
Fast Food Restaurant w/o Drive Thru	4.41	1000sqft	0.10	4,407.00	0
Apartments Low Rise	80.00	Dwelling Unit	5.00	80,000.00	229
Strip Mall	4.41	1000sqft	0.10	4,407.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2025
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 - Enclosed Parking Structure is for the 160 spaces in the apartment garages, and the parking lot is for the 56 open guest and commercial use spaces. The reduction of lot acreage for Residential to accommodate for multi-story buildings

Construction Phase - Based on client given construction schedule

Trips and VMT - Based on closest disposal site at California Waste Services. 621 W 152nd street

Grading - Based on site preparation at start and hardscape removal

Vehicle Trips - Daily trips based on Trip Generation values from Kimley-Horn traffic group. Low rise: $(539 - 12)/(80) = 6.59$ Fast food: $(1985 - 62 - 140)/(4.407) = 404.580$

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

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	43.00
tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	230.00	415.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	20.00	67.00
tblGrading	AcresOfGrading	87.00	20.00
tblGrading	AcresOfGrading	64.50	15.00
tblGrading	MaterialExported	0.00	2,442.60
tblLandUse	LandUseSquareFeet	2,440.00	2,443.00
tblLandUse	LandUseSquareFeet	4,410.00	4,407.00
tblLandUse	LandUseSquareFeet	4,410.00	4,407.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	WorkerTripNumber	20.00	15.00
tblVehicleTrips	ST_TR	8.14	6.59
tblVehicleTrips	ST_TR	696.00	404.58
tblVehicleTrips	ST_TR	2.21	14.39
tblVehicleTrips	ST_TR	42.04	54.45
tblVehicleTrips	SU_TR	6.28	6.59
tblVehicleTrips	SU_TR	500.00	404.58
tblVehicleTrips	SU_TR	0.70	14.39
tblVehicleTrips	SU_TR	20.43	54.45
tblVehicleTrips	WD_TR	7.32	6.59
tblVehicleTrips	WD_TR	346.23	404.58
tblVehicleTrips	WD_TR	9.74	14.39

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

tblVehicleTrips	WD_TR	44.32	54.45
tblWoodstoves	NumberCatalytic	4.00	0.00
tblWoodstoves	NumberNoncatalytic	4.00	0.00

2.0 Emissions Summary

ABCSPA - Los Angeles-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					
2023	4.4952	46.3081	34.2899	0.0741	25.1695	2.0478	27.2173	13.4320	1.8842	15.3162	0.0000	7,234.690 1	7,234.690 1	2.1500	0.0656	7,307.997 6
2024	4.5075	40.0360	47.4771	0.0918	7.8568	1.7495	9.6063	3.7621	1.6241	5.3862	0.0000	8,906.764 0	8,906.764 0	2.1473	0.1005	8,990.396 1
2025	11.3076	14.8502	21.6555	0.0448	1.4791	0.5912	2.0703	0.3959	0.5591	0.9550	0.0000	4,372.498 1	4,372.498 1	0.6579	0.0952	4,417.309 8
Maximum	11.3076	46.3081	47.4771	0.0918	25.1695	2.0478	27.2173	13.4320	1.8842	15.3162	0.0000	8,906.764 0	8,906.764 0	2.1500	0.1005	8,990.396 1

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.9536	4.4393	39.9166	0.0741	10.1012	0.1174	10.2186	5.3146	0.1170	5.4316	0.0000	7,234.690 1	7,234.690 1	2.1500	0.0656	7,307.997 6
2024	1.4033	6.0475	53.0752	0.0918	4.0346	0.1316	4.1662	1.7268	0.1307	1.8575	0.0000	8,906.764 0	8,906.764 0	2.1473	0.1005	8,990.396 0
2025	10.1268	3.5985	23.0544	0.0448	1.4791	0.0569	1.5360	0.3959	0.0561	0.4520	0.0000	4,372.498 1	4,372.498 1	0.6579	0.0952	4,417.309 8
Maximum	10.1268	6.0475	53.0752	0.0918	10.1012	0.1316	10.2186	5.3146	0.1307	5.4316	0.0000	8,906.764 0	8,906.764 0	2.1500	0.1005	8,990.396 0

ABCSPA - Los Angeles-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	38.53	86.08	-12.21	0.00	54.75	93.03	59.07	57.72	92.53	64.26	0.00	0.00	0.00	0.00	0.00	0.00

ABCSPA - Los Angeles-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	21.0137	1.4162	27.6930	0.0402		2.9490	2.9490		2.9490	2.9490	277.2224	1,451.9339	1,729.1563	0.0391	0.0509	1,745.2906
Energy	0.0685	0.6019	0.3728	3.7300e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144
Mobile	5.9087	5.7376	52.3028	0.1060	11.7967	0.0808	11.8775	3.1424	0.0750	3.2174		10,808.4979	10,808.4979	0.8493	0.5164	10,983.6166
Total	26.9908	7.7557	80.3685	0.1498	11.7967	3.0771	14.8738	3.1424	3.0713	6.2138	277.2224	13,007.3079	13,284.5303	0.9027	0.5810	13,480.2216

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	2.2099	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367	0.0000	11.9339	11.9339	0.0115	0.0000	12.2217
Energy	0.0685	0.6019	0.3728	3.7300e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144
Mobile	5.9087	5.7376	52.3028	0.1060	11.7967	0.0808	11.8775	3.1424	0.0750	3.2174		10,808.4979	10,808.4979	0.8493	0.5164	10,983.6166
Total	8.1871	6.4157	59.2925	0.1100	11.7967	0.1647	11.9615	3.1424	0.1590	3.3014	0.0000	11,567.3079	11,567.3079	0.8751	0.5301	11,747.1527

ABCSPA - Los Angeles-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	69.67	17.28	26.22	26.57	0.00	94.65	19.58	0.00	94.82	46.87	100.00	11.07	12.93	3.06	8.75	12.86

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2023	10/31/2023	5	43	
2	Grading	Grading	9/1/2023	1/1/2024	5	87	
3	Building Construction	Building Construction	1/1/2024	8/1/2025	5	415	
4	Paving	Paving	1/1/2024	2/1/2024	5	24	
5	Architectural Coating	Architectural Coating	5/1/2025	8/1/2025	5	67	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 1.94

Residential Indoor: 162,000; Residential Outdoor: 54,000; Non-Residential Indoor: 16,886; Non-Residential Outdoor: 5,629; Striped Parking Area: 5,184 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
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

ABCSPA - Los Angeles-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	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	242.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	98.00	25.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

ABCSPA - Los Angeles-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 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.4362	0.0000	18.4362	9.9706	0.0000	9.9706			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	2.6595	27.5242	18.2443	0.0381	18.4362	1.2660	19.7022	9.9706	1.1647	11.1354		3,687.308 1	3,687.308 1	1.1926		3,717.121 9

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	0.0114	0.7668	0.1987	3.2900e-003	0.0985	4.6400e-003	0.1032	0.0270	4.4400e-003	0.0315		362.0644	362.0644	0.0199	0.0575	379.6957
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	0.0619	0.0444	0.5979	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1100e-003	0.0545		170.5237	170.5237	4.6000e-003	4.4400e-003	171.9610
Total	0.0733	0.8111	0.7966	4.9800e-003	0.2997	5.8500e-003	0.3056	0.0804	5.5500e-003	0.0859		532.5880	532.5880	0.0245	0.0619	551.6567

ABCSPA - Los Angeles-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 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1901	0.0000	7.1901	3.8885	0.0000	3.8885			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	0.4656	2.0175	20.8690	0.0381	7.1901	0.0621	7.2522	3.8885	0.0621	3.9506	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9

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	0.0114	0.7668	0.1987	3.2900e-003	0.0985	4.6400e-003	0.1032	0.0270	4.4400e-003	0.0315		362.0644	362.0644	0.0199	0.0575	379.6957
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	0.0619	0.0444	0.5979	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1100e-003	0.0545		170.5237	170.5237	4.6000e-003	4.4400e-003	171.9610
Total	0.0733	0.8111	0.7966	4.9800e-003	0.2997	5.8500e-003	0.3056	0.0804	5.5500e-003	0.0859		532.5880	532.5880	0.0245	0.0619	551.6567

ABCSPA - Los Angeles-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 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2659	0.0000	6.2659	3.3366	0.0000	3.3366			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	1.7109	17.9359	14.7507	0.0297	6.2659	0.7749	7.0408	3.3366	0.7129	4.0495		2,872.6910	2,872.6910	0.9291		2,895.9182

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0516	0.0370	0.4983	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		142.1030	142.1030	3.8300e-003	3.7000e-003	143.3009
Total	0.0516	0.0370	0.4983	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		142.1030	142.1030	3.8300e-003	3.7000e-003	143.3009

ABCSPA - Los Angeles-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 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4437	0.0000	2.4437	1.3013	0.0000	1.3013			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	0.3632	1.5737	17.7527	0.0297	2.4437	0.0484	2.4921	1.3013	0.0484	1.3497	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0516	0.0370	0.4983	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		142.1030	142.1030	3.8300e-003	3.7000e-003	143.3009
Total	0.0516	0.0370	0.4983	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		142.1030	142.1030	3.8300e-003	3.7000e-003	143.3009

ABCSPA - Los Angeles-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 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2659	0.0000	6.2659	3.3366	0.0000	3.3366			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665		2,873.054 1	2,873.054 1	0.9292		2,896.284 2
Total	1.6617	17.0310	14.7594	0.0297	6.2659	0.7244	6.9903	3.3366	0.6665	4.0030		2,873.054 1	2,873.054 1	0.9292		2,896.284 2

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	0.0482	0.0330	0.4634	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0884	138.0884	3.4700e-003	3.4400e-003	139.1997
Total	0.0482	0.0330	0.4634	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0884	138.0884	3.4700e-003	3.4400e-003	139.1997

ABCSPA - Los Angeles-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 Grading - 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					
Fugitive Dust					2.4437	0.0000	2.4437	1.3013	0.0000	1.3013			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,873.054 1	2,873.054 1	0.9292		2,896.284 2
Total	0.3632	1.5737	17.7527	0.0297	2.4437	0.0484	2.4921	1.3013	0.0484	1.3497	0.0000	2,873.054 1	2,873.054 1	0.9292		2,896.284 2

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	0.0482	0.0330	0.4634	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0884	138.0884	3.4700e-003	3.4400e-003	139.1997
Total	0.0482	0.0330	0.4634	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0884	138.0884	3.4700e-003	3.4400e-003	139.1997

ABCSPA - Los Angeles-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 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

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	0.0269	1.0067	0.3754	4.5900e-003	0.1601	4.8800e-003	0.1650	0.0461	4.6700e-003	0.0508		494.0358	494.0358	0.0168	0.0712	515.6631
Worker	0.3150	0.2155	3.0277	8.9300e-003	1.0954	6.3100e-003	1.1017	0.2905	5.8100e-003	0.2963		902.1778	902.1778	0.0227	0.0225	909.4379
Total	0.3419	1.2222	3.4031	0.0135	1.2556	0.0112	1.2667	0.3366	0.0105	0.3471		1,396.2136	1,396.2136	0.0395	0.0936	1,425.1010

ABCSPA - Los Angeles-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 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	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

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	0.0269	1.0067	0.3754	4.5900e-003	0.1601	4.8800e-003	0.1650	0.0461	4.6700e-003	0.0508		494.0358	494.0358	0.0168	0.0712	515.6631
Worker	0.3150	0.2155	3.0277	8.9300e-003	1.0954	6.3100e-003	1.1017	0.2905	5.8100e-003	0.2963		902.1778	902.1778	0.0227	0.0225	909.4379
Total	0.3419	1.2222	3.4031	0.0135	1.2556	0.0112	1.2667	0.3366	0.0105	0.3471		1,396.2136	1,396.2136	0.0395	0.0936	1,425.1010

ABCSPA - Los Angeles-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 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0261	1.0020	0.3686	4.5000e-003	0.1601	4.9000e-003	0.1650	0.0461	4.6900e-003	0.0508		485.1562	485.1562	0.0169	0.0699	506.4189
Worker	0.2954	0.1935	2.8181	8.6200e-003	1.0954	6.0000e-003	1.1014	0.2905	5.5300e-003	0.2960		871.5518	871.5518	0.0205	0.0210	878.3134
Total	0.3215	1.1955	3.1866	0.0131	1.2556	0.0109	1.2665	0.3366	0.0102	0.3468		1,356.708 0	1,356.708 0	0.0374	0.0909	1,384.732 2

ABCSPA - Los Angeles-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 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0261	1.0020	0.3686	4.5000e-003	0.1601	4.9000e-003	0.1650	0.0461	4.6900e-003	0.0508		485.1562	485.1562	0.0169	0.0699	506.4189
Worker	0.2954	0.1935	2.8181	8.6200e-003	1.0954	6.0000e-003	1.1014	0.2905	5.5300e-003	0.2960		871.5518	871.5518	0.0205	0.0210	878.3134
Total	0.3215	1.1955	3.1866	0.0131	1.2556	0.0109	1.2665	0.3366	0.0102	0.3468		1,356.708 0	1,356.708 0	0.0374	0.0909	1,384.732 2

ABCSPA - Los Angeles-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 Paving - 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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9360	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039

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	0.0482	0.0330	0.4634	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0884	138.0884	3.4700e-003	3.4400e-003	139.1997
Total	0.0482	0.0330	0.4634	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0884	138.0884	3.4700e-003	3.4400e-003	139.1997

ABCSPA - Los Angeles-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 Paving - 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	0.2194	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2740	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

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	0.0482	0.0330	0.4634	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0884	138.0884	3.4700e-003	3.4400e-003	139.1997
Total	0.0482	0.0330	0.4634	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0884	138.0884	3.4700e-003	3.4400e-003	139.1997

ABCSPA - Los Angeles-South Coast County, Winter

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

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.3875					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	9.5584	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

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	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476

ABCSPA - Los Angeles-South Coast County, Winter

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

3.6 Architectural Coating - 2025

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	9.3875					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	9.4173	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319

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	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476

ABCSPA - Los Angeles-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	5.9087	5.7376	52.3028	0.1060	11.7967	0.0808	11.8775	3.1424	0.0750	3.2174		10,808.4979	10,808.4979	0.8493	0.5164	10,983.6166
Unmitigated	5.9087	5.7376	52.3028	0.1060	11.7967	0.0808	11.8775	3.1424	0.0750	3.2174		10,808.4979	10,808.4979	0.8493	0.5164	10,983.6166

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	527.20	527.20	527.20	1,801,522	1,801,522
Enclosed Parking Structure	0.00	0.00	0.00		
Fast Food Restaurant w/o Drive Thru	1,784.20	1,784.20	1784.20	3,231,260	3,231,260
General Office Building	35.11	35.11	35.11	113,111	113,111
Parking Lot	0.00	0.00	0.00		
Strip Mall	240.12	240.12	240.12	456,860	456,860
Total	2,586.63	2,586.63	2,586.63	5,602,753	5,602,753

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

ABCSPA - Los Angeles-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
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Enclosed Parking Structure	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Fast Food Restaurant w/o Drive Thru	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
General Office Building	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Parking Lot	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Strip Mall	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

ABCSPA - Los Angeles-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					
NaturalGas Mitigated	0.0685	0.6019	0.3728	3.7300e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144
NaturalGas Unmitigated	0.0685	0.6019	0.3728	3.7300e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144

ABCSPA - Los Angeles-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	3478.76	0.0375	0.3206	0.1364	2.0500e-003		0.0259	0.0259		0.0259	0.0259		409.2661	409.2661	7.8400e-003	7.5000e-003	411.6981
Enclosed Parking Structure	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
Fast Food Restaurant w/o Drive Thru	2781	0.0300	0.2727	0.2290	1.6400e-003		0.0207	0.0207		0.0207	0.0207		327.1763	327.1763	6.2700e-003	6.0000e-003	329.1205
General Office Building	69.0064	7.4000e-004	6.7700e-003	5.6800e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		8.1184	8.1184	1.6000e-004	1.5000e-004	8.1666
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	19.6806	2.1000e-004	1.9300e-003	1.6200e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		2.3154	2.3154	4.0000e-005	4.0000e-005	2.3291
Total		0.0685	0.6019	0.3727	3.7400e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144

ABCSPA - Los Angeles-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	3.47876	0.0375	0.3206	0.1364	2.0500e-003		0.0259	0.0259		0.0259	0.0259		409.2661	409.2661	7.8400e-003	7.5000e-003	411.6981
Enclosed Parking Structure	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
Fast Food Restaurant w/o Drive Thru	2.781	0.0300	0.2727	0.2290	1.6400e-003		0.0207	0.0207		0.0207	0.0207		327.1763	327.1763	6.2700e-003	6.0000e-003	329.1205
General Office Building	0.0690064	7.4000e-004	6.7700e-003	5.6800e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		8.1184	8.1184	1.6000e-004	1.5000e-004	8.1666
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0196806	2.1000e-004	1.9300e-003	1.6200e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		2.3154	2.3154	4.0000e-005	4.0000e-005	2.3291
Total		0.0685	0.6019	0.3727	3.7400e-003		0.0473	0.0473		0.0473	0.0473		746.8761	746.8761	0.0143	0.0137	751.3144

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

ABCSPA - Los Angeles-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	2.2099	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367	0.0000	11.9339	11.9339	0.0115	0.0000	12.2217
Unmitigated	21.0137	1.4162	27.6930	0.0402		2.9490	2.9490		2.9490	2.9490	277.2224	1,451.9339	1,729.1563	0.0391	0.0509	1,745.2906

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	0.1723					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	18.8037	1.3400	21.0760	0.0398		2.9124	2.9124		2.9124	2.9124	277.2224	1,440.0000	1,717.2224	0.0276	0.0509	1,733.0689
Landscaping	0.2001	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367		11.9339	11.9339	0.0115		12.2217
Total	21.0137	1.4162	27.6930	0.0402		2.9490	2.9490		2.9490	2.9490	277.2224	1,451.9339	1,729.1563	0.0391	0.0509	1,745.2906

ABCSPA - Los Angeles-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	0.1723					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8375					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	0.2001	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367		11.9339	11.9339	0.0115		12.2217
Total	2.2099	0.0762	6.6170	3.5000e-004		0.0367	0.0367		0.0367	0.0367	0.0000	11.9339	11.9339	0.0115	0.0000	12.2217

7.0 Water Detail

7.1 Mitigation Measures Water

ABCSPA - Los Angeles-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

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
