# **APPENDIX B1**

AIR QUALITY ASSESSMENT

# Air Quality Assessment CADO Menifee Industrial Warehouse Project City of Menifee, California

Prepared by:



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March 2024

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#### APPENDICES

Appendix A: Air Quality Modeling Data

#### LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADT	average daily traffic
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
СО	carbon monoxide
су	cubic yards
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H <sub>2</sub> S	hydrogen sulfide
Pb	lead
LST	local significance threshold
μg/m³	micrograms per cubic meter
mg/m <sup>3</sup>	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxide
O <sub>3</sub>	ozone
PM <sub>10</sub>	particulate matter less than 10 microns in diameter
PM <sub>2.5</sub>	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
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
sf	square foot
SO <sub>4-2</sub>	sulfates
SO <sub>2</sub>	sulfur dioxide
TAC	toxic air contaminant
C <sub>2</sub> H <sub>3</sub> Cl	vinyl chloride
VOC	volatile organic compound

# 1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the CADO Menifee Industrial Warehouse project (Project). The purpose of this Air Quality Assessment is to evaluate the potential construction and operational emissions associated with the Project and determine the level of impact the Project would have on the environment.

#### 1.1 Project Location

The Project site is located approximately 1.5 miles west of Interstate 215 (I-215) and approximately 3.0 miles south of State Route (SR) 74, within the City of Menifee (see <u>Exhibit 1: Regional Vicinity Map</u>). The Project is north of Corsica Lane, south of Kuffel Road, east of Wheat Street, and west of Byers Road, within the City. The Project site is located in the Economic Development Corridor- Northern Gateway (EDC-NG) of the City and is currently bordered by a scattering of existing rural residential homes (1-5 acres) and outbuildings, proposed future industrial sites, and vacant land (refer to <u>Exhibit 2: Site Vicinity Map</u>).

#### **1.2 Project Description**

The Project applicant proposes the development of approximately 700,037 square feet (SF) of industrial warehouse space (including office space) within one building on a total of 36.8 net acres (refer to Exhibit <u>3: Conceptual Site Plan</u>). The proposed concrete tilt-up build would include approximately 690,037 SF of warehouse space and 10,000 SF of office space; approximating 700,037 total SF of development. The building would also contain 49 dock doors on the northern portion of the building and 49 dock doors on the southern portion of the building for a total of 98 dock doors. The Project would include 499 automobile parking spaces and 245 truck trailer parking spaces.

#### **Project Circulation**

Regional Project access would be from I-215 via the potential truck route, Ethanac Road.<sup>1</sup> Local access would be provided via Ethanac Road to Wheat Street or Byers Road. Access to the Project site for both automobiles and trucks is proposed off the following:

- One 40-foot access driveway is on the northwest side of the building on Wheat Street.
- One 40-foot access driveway is on the southwest side of the building on Wheat Street.
- One 41.5-foot access driveway is on the northeast side of the building on Byers Road.
- One 40-foot access driveway is on the southeast side of the building on Byers Road.

Emergency vehicle access is provided around the building with a minimum 26-foot-wide fire lane.

#### Landscaping

Landscaped areas for the Project site approximate 162,886 SF, which is 10.7 percent landscaping on the Project site. Landscaping will be provided along all streets in the parkway, on the front setbacks, on all sides of the Project site, adjacent to the building on the south, east, and west sides, and throughout the

City of Menifee. 2013. Menifee General Plan Exhibit C-7: Potential Truck Routes. https://www.cityofmenifee.us/DocumentCenter/View/1024/C-7-Truck\_Routes\_HD0913?bidId= (accessed April 2022).

parking areas. The stormwater detention basin located off-site to the north of the Project site would be planted with grasses and shrubs tolerant of seasonal water inundation.

#### **Offsite Improvements**

The following street improvements are anticipated for the Industrial Collector Streets:

- Byers Road would serve as the north/south roadway for autos and trucks to and from the Project site. Improvements to Byers Road would include widening to a half-width plus 12 feet. The road would be paved and would include curb/gutter, sidewalk, and a landscaped parkway.
- Wheat Street would serve as the north/south roadway mainly for autos/employees to and from the Project site. Improvements to Wheat Street would include widening to a half-width plus 12 feet. The street would be paved and would include curb/gutter, sidewalk, and a landscaped parkway.

The following street improvements are anticipated for the General Local Road:

• Kuffel Road would serve as a west/east roadway. Improvements to Kuffel Road would include widening to a half-width plus 12 feet. The road would be paved and would include curb/gutter, sidewalk, and landscaping adjacent to the stormwater detention basin.

#### **Project Phasing and Construction**

The Project is anticipated to be developed in one phase. Construction for the Project is anticipated to occur over approximately 14 months, beginning in 2024. The Project would require 145,000 cubic yards (CYs) of soil fill (import).



Source: ESRI ArcGIS Pro.

Exhibit 1: Regional Vicinity Map City of Menifee CADO Project







Source: ESRI ArcGIS Pro.

Exhibit 2: Site Vicinity Map City of Menifee CADO Project







Gross In s.f.		
In s.f.		
	1,743,706	s.f.
In acres	40.03	ac
Net		
In s.f.	1,603,443	s.f.
In acres	36.81	ac
BUILDING AREA		
Office	10,000	s.f.
Warehouse	690,037	s.f.
TOTAL	700,037	s.f.
COVERAGE	40.1%	
AUTO PARKING REQUIRED		
Office: 1/250 s.f.	40	stalls
Whse: 1/2,000 s.f.	346	stalls
TOTAL	386	stall
HANDICAP PARKING STALLS REQUIRED	9	stall
		5 tun
Per CBC Table 11B-208.2, 401 to 500 parking spaces is requ	uired	
to provide 9 accessible parking spaces.		
ELECTRIC VEHICLE CHARGING SPACES REQUIRED		
10% of Total parking provided per CBC Table 5.106.5.3.3	50	stall
CLEAR AIR VEHICLE PARKING REQUIRED		
12% of total parking provided per CGC Table 5.106.5.2	60	stall
AUTO PARKING PROVIDED		
Standard (9' x 18')	379	stalls
Handicap (9'x18')	10	stalls
Clean Air/FEV/Carpool/Van Pool	60	stalls
EV Charging Parking Spaces	50	stalls
TOTAL	499	stall
TRAILER PARKING PROVIDED		
Trailer (10' x 55')	245	stalls
ZONING ORDINANCE FOR CITY		
EDC-Northern Gatew ay Zone		
Height - 50' (100' Max)		
MAXIMUM FLOOR AREA RATIO		
FAR - 1.0		
LANDSCAPE OPEN SPACE REQUIRED		
10% OF TOTAL AREA EXCLUDING FRONT SET BACK AREA		
LANDSCAPE OPEN SPACE PROVIDED		
Area	162,886	s.f.
Percentage	10,7%	
SETBACKS		
SETBACKS Front	25'	
SETBACKS Front Side	25' 15'	

Source: HPA Architecture. (2023). Overall Site Plan

**Exhibit 3**: Conceptual Site Plan City of Menifee *CADO Menifee Industrial Warehouse Project* 





## 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 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, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter<sup>2</sup>. Air quality in this area is determined by such natural factors 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

<sup>&</sup>lt;sup>2</sup> South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

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.

#### 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<sub>X</sub>), sulfur dioxide (SO<sub>2</sub>), coarse particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and lead are primary air pollutants. Of these, CO, NO<sub>X</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are criteria pollutants. ROG and NO<sub>X</sub> are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O<sub>3</sub>) is formed by a chemical reaction between ROG and NO<sub>X</sub> in the presence of sunlight. O<sub>3</sub> and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 1: Air Contaminants and Associated Public Health Concerns.

Table 1: Air Contaminants and Associated Public Health Concerns					
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 <sub>3</sub> )	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC) <sup>1</sup> and nitrogen oxides (NO <sub>x</sub> ) 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 <sub>2</sub> )	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and 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 <sub>2</sub> )	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	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food,			

Table 1: Air Contaminants and Associated Public Health Concerns						
Pollutant	Major Man-Made Sources	Human Health Effects				
	products. The major sources of lead	water, soil, or dust. It accumulates in the blood,				
	emissions have historically been motor	bones, and soft tissues and can adversely affect				
	vehicles (such as cars and trucks) and	the kidneys, liver, nervous system, and other				
	industrial sources. Due to the phase out of	organs. Excessive exposure to lead may cause				
	leaded gasoline, metals processing is the	neurological impairments such as seizures,				
	major source of lead emissions to the air mental retardation, and behavioral disorde					
	today. The highest levels of lead in air are Even at low doses, lead exposure is associated					
	generally found near lead smelters. Other with damage to the nervous systems of fet					
	stationary sources are waste incinerators,	and young children, resulting in learning				
	utilities, and lead-acid battery	deficits and lowered IQ.				
	manufacturers.					
<sup>1</sup> Volatile Organic Compounds (V	OCs or Reactive Organic Gases [ROG]) are hydrocarl	bons/organic gases that are formed solely of hydrogen				
and carbon. There are several	subsets of organic gases including ROGs and VOCs. I	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; ot	her common sources are petroleum fuels, solvents, o	dry cleaning solutions, and paint (via evaporation).				
Source: California Air Pollution (	Source: California Air Pollution Control Officers Association (CAPCOA), Health Effects, http://www.capcoa.org/health-effects/, Accessed					
August 22, 2022.						

#### **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.

#### **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 levels of ambient air quality, historical trends, and projections near the Project are documented by measurements made by the South Coast Air Quality Management District (SCAQMD), 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 O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The closest air monitoring station to the Project that monitors ambient concentrations of these pollutants is the Lake Elsinore Monitoring Station (located approximately seven miles to the southwest). Local air quality data from 2020 to 2022 are provided in <u>Table 2</u>: Ambient Air Quality Data, which lists the monitored maximum concentrations and number of exceedances of state or federal air quality standards for each year.

Table 2: Ambient Air Quality Data					
Criteria Pollutant	2020	2021	2022		
Ozone (O <sub>3</sub> )					
1-hour Maximum Concentration (ppm)	0.130	0.118	0.121		
8-hour Maximum Concentration (ppm)	0.100	0.097	0.091		
Number of Days Standard Exceeded			•		
CAAQS 1-hour (>0.09 ppm)	18	18	17		
NAAQS 8-hour (>0.070 ppm)	54	44	37		
Carbon Monoxide (CO)			·		
1-hour Maximum Concentration (ppm)	1.829	2.022	3.272		
Number of Days Standard Exceeded			•		
NAAQS 1-hour (>35 ppm)	0	0	0		
CAAQS 1-hour (>20 ppm)	0	0	0		
Nitrogen Dioxide (NO <sub>2</sub> )			·		
1-hour Maximum Concentration (ppm)	0.0436	0.0437	0.0372		
Number of Days Standard Exceeded			•		
NAAQS 1-hour (>0.100 ppm)	0	0	0		
CAAQS 1-hour (>0.18 ppm)	0	0	0		
Particulate Matter Less Than 10 Microns (PM <sub>10</sub> )			·		
National 24-hour Maximum Concentration	192	90	91.8		
State 24-hour Maximum Concentration	—	-	-		
State Annual Average Concentration (CAAQS=20 µg/m <sup>3</sup> )	_	-	_		
Number of Days Standard Exceeded			·		
NAAQS 24-hour (>150 μg/m <sup>3</sup> )	1	0	0		
CAAQS 24-hour (>50 μg/m <sup>3</sup> )	—	-	—		
Particulate Matter Less Than 2.5 Microns (PM <sub>2.5</sub> )			·		
National 24-hour Maximum Concentration	_	-	-		
State 24-hour Maximum Concentration	41.6	28.8	16.2		
Number of Days Standard Exceeded					
NAAQS 24-hour (>35 μg/m <sup>3</sup> )	_	-	_		
NAAQS = National Ambient Air Quality Standards; CAAQS = Californ	ia Ambient Air Quality St	andards; ppm = parts per i	nillion.		
$\mu g/m^3$ = micrograms per cubic meter; – = not measured					
Measurements taken at the Lake Elsinore-W Flint Street Monitoring	Station at 506 W Flint St	eet, Lake Elsinore, Californ	ia 92530 (CARB# 33158)		
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. The Project site is surrounded by vacant/undeveloped, agriculture, and scattered residential land uses to the west, south, and east. North of the Project is primarily residential. Sensitive land uses nearest to the Project are shown in <u>Table 3: Sensitive Receptors</u>.

Table 3: Sensitive Receptors		
Receptor Description	Distance and Direction from the Project	Description
Single-family Residences	90 feet to the north	Houses along the north side of Kuffel Road, between Wheat Street and Byers Road
Single-family Residences	100 feet to the west	Houses along the west side of Wheat Street, between Kuffel Road and Corsica Lane
Single-family Residence	100 feet to the east	House along the east side of Byers Road, between Kuffel Road and Corsica Lane
Single-family Residence	180 feet to the south	House along the north side of Corsica Lane, between Wheat Street and Byers Road
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 United States Environmental Protection Agency (EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O<sub>3</sub>, NO<sub>2</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent airpermitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it would attain the NAAQS within the federally imposed deadlines.

The 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 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 EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in Table 4: 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 California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in <u>Table 4</u>, 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 federal clean air standards for the State of California. Like the 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 State standards are summarized in <u>Table 4</u>.

Table 4: State and Federal Ambient Air Quality Standards					
Pollutant	Averaging Time	State Standards <sup>1</sup>	Federal Standards <sup>2</sup>		
$\Omega_{2000} = (\Omega_{2})^{2, 5, 7}$	1 Hour 0.09 ppm (180 μg/m <sup>3</sup> )		NA		
020112 (03)	8 Hour	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)		
Carbon Manavida (CO)	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )		
Nitragon Dioxida (NO.)	1 Hour	0.18 ppm (339 μg/m <sup>3</sup> )	0.100 ppm (188 μg/m³)		
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppm (57 μg/m <sup>3</sup> )	0.053 ppm (100 μg/m <sup>3</sup> )		
	1 Hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)		
Sulfur Dioxide (SO <sub>2</sub> ) <sup>8</sup>	24 Hour	0.04 ppm (105 μg/m³)	0.14 ppm (365 μg/m <sup>3</sup> )		
	Annual Arithmetic Mean	NA	0.03 ppm (80 μg/m³)		
Destiguisto Matter (DNA ) 136	24-Hour	50 μg/m³	150 μg/m³		
	Annual Arithmetic Mean	20 μg/m³	NA		
Fine Derticulate Matter (DM ) 3469	24-Hour	NA	35 μg/m³		
Fine Particulate Matter (PMi2.5) 5, 1, 5, 5	Annual Arithmetic Mean	12 μg/m³	9 μg/m³		
Sulfates (SO <sub>4-2</sub> )	24 Hour	25 μg/m³	NA		
	30-Day Average	1.5 μg/m³	NA		
Lead (Pb) <sup>10, 11</sup>	Calendar Quarter	NA	1.5 μg/m³		
	Rolling 3-Month Average	NA	0.15 μg/m <sup>3</sup>		
Hydrogen Sulfide (H <sub>2</sub> S)	1 Hour	0.03 ppm (42 μg/m <sup>3</sup> )	NA		
Vinyl Chloride (C <sub>2</sub> H <sub>3</sub> Cl) <sup>10</sup>	24 Hour	0.01 ppm (26 μg/m <sup>3</sup> )	NA		

Notes:

ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter; mg/m<sup>3</sup> = milligrams per cubic meter; – = no information available.

<sup>1</sup> California standards for O<sub>3</sub>, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM<sub>10</sub>, 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 PM<sub>10</sub> 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.

- <sup>2</sup> National standards shown are the "primary standards" designed to protect public health. National standards other than for O<sub>3</sub>, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O<sub>3</sub> 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 O<sub>3</sub> standard is attained when the 3-year average of the 4<sup>th</sup> highest daily concentrations is 0.070 ppm or less. The 24-hour PM<sub>10</sub> standard is attained when the 3-year average of the 99<sup>th</sup> percentile of monitored concentrations is less than 150 µg/m<sub>3</sub>. The 24-hour PM<sub>2.5</sub> standard is attained when the 3-year average of 98<sup>th</sup> percentiles is less than 35 µg/m<sup>3</sup>.
- <sup>3</sup> 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 PM<sub>10</sub> is met if the 3-year average falls below the standard at every site. The annual PM<sub>2.5</sub> 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 EPA at levels determined to be protective of public health with an adequate margin of safety.
- <sup>4</sup> On October 1, 2015, the national 8-hour O<sub>3</sub> 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 O<sub>3</sub> concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O<sub>3</sub> level in the area.
- $^{5}$  The national 1-hour O<sub>3</sub> standard was revoked by the EPA on June 15, 2005.
- <sup>6</sup> In June 2002, CARB established new annual standards for PM<sub>2.5</sub> and PM<sub>10</sub>.
- <sup>7</sup> The 8-hour California O<sub>3</sub> standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.
- <sup>8</sup> On June 2, 2010, the EPA established a new 1-hour SO<sub>2</sub> standard, effective August 23, 2010, which is based on the 3-year average of the annual 99<sup>th</sup> percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO<sub>2</sub> NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO<sub>2</sub> NAAQS.
- <sup>9</sup> In February 2024, EPA strengthened the annual PM2.5 NAAQS from 12.0 to 9.0 μg/m3. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels.
- <sup>10</sup> 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.

<sup>11</sup> 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*, March 2022 and https://www.epa.gov/pm-pollution/national-ambient-air-guality-standards-naags-pm

#### **Diesel Risk Reduction Plan**

The identification of DPM as a TAC in 1998 led CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (DRRP) in October 2000. The DRRP's goals include an 85 percent reduction in DPM by 2020 from the 2000 baseline.<sup>3</sup> CARB estimates that emissions of DPM in 2035 will be less than half those in 2010, further reducing statewide cancer risk and non-cancer health effects.<sup>4</sup> The DRRP includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

#### Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO<sub>x</sub>) emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks must be retrofitted with PM filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. Beginning January 1, 2023, nearly all trucks and buses are required to have 2010 model year engines or equivalent.

The regulation applies to most privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks and there are several extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

#### Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of the CARB ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to diesel particulate matter and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles. The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system (APS) for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, beginning in 2008, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

Section 2485 and Section 2449 of Title 13 of the California Code of Regulations limits diesel-fueled motor vehicle idling to no more than five minutes. Section 2485 limits idling for diesel-fueled commercial motor vehicles with gross vehicle weight ratings of greater than 10,000 pounds that are or must be licensed to

<sup>&</sup>lt;sup>3</sup> California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

<sup>&</sup>lt;sup>4</sup> California Air Resources Board, *Overview: Diesel Exhaust & Health*, available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health, accessed October 2023.

operate on publicly maintained highways and streets within California. Section 2449 limits idling for offroad diesel-fueled fleets.

#### CARB Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales need to be 55 percent of Class 2b 3 truck sales, 75 percent of Class 4 8 straight truck sales, and 40 percent of truck tractor sales.
- Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

#### **Executive Order N-79-20**

Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new zero emission vehicles (ZEVs) "towards the target of 100 percent." The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

#### 3.3 Regional

#### South Coast Air Quality Management District

The SCAQMD 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 state and federal ambient air quality standards are attained and maintained in the SCAB. The SCAQMD 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 SCAQMD rules and regulations in effect at the time of construction.

The SCAQMD 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. The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour PM<sub>2.5</sub> air quality standard, and to provide an update to the SCAQMD's commitments towards meeting the federal 8-hour O<sub>3</sub> standards.

On October 1, 2015, the EPA strengthened the NAAQS for ground-level O<sub>3</sub>. The 2022 AQMP, adopted by the SCAQMD Governing Board on December 2, 2022, was developed to address the requirements for meeting the 2015 8-hour O<sub>3</sub> standard. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of 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 ozone standard. The 2022 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) or Connect SoCal and updated emission inventory methodologies for various source categories.

The SCAQMD has published the *CEQA Air Quality Handbook* (approved by the SCAQMD Governing Board in 1993 and augmented with guidance for Local Significance Thresholds [LST] in 2008). The SCAQMD 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 SCAQMD periodically provides supplemental guidance and updates to the handbook on their website.

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 <u>Table 5: South Coast</u> <u>Air Basin Attainment Status</u>. The SCAB is currently designated as a nonattainment area with respect to the State  $O_3$ ,  $PM_{10}$ , and  $PM_{2.5}$  standards, as well as the national 8-hour  $O_3$  and  $PM_{2.5}$  standards. The SCAB is designated as attainment or unclassified for the remaining state and federal standards.

Table 5: South Coast Air Basin Attainment Status					
Pollutant	State	Federal			
Ozone (O₃)	Non Attainment	Non Attainment (Extreme)			
(1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)			
Ozone (O₃)	Non-Attainment	Non-Attainment (Extreme)			
(8 Hour Standard)	Non-Attainment				
Particulate Matter (PM <sub>2.5</sub> )	_	Non-Attainment (Serious)			
(24 Hour Standard)		Non-Attainment (Serious)			
Particulate Matter (PM <sub>2.5</sub> )	Non-Attainment	Non-Attainment (Moderate)			
(Annual Standard)	Non-Attainment	Non-Attainment (Moderate)			
Particulate Matter (PM <sub>10</sub> )	Non-Attainment	Attainment (Maintenance)			
(24 Hour Standard)	Non Attainment	Attainment (Maintenance)			
Particulate Matter (PM <sub>10</sub> )	Non-Attainment	_			
(Annual Standard)					
Carbon Monoxide (CO)	Attainment	Attainment (Maintenance)			
(1 Hour Standard)	Acconnected				
Carbon Monoxide (CO)	Attainment	Attainment (Maintenance)			
(8 Hour Standard)	, additioned				
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment	Unclassifiable/Attainment			
(1 Hour Standard)	Acconnent	onclassifiable/ Attainment			
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment	Attainment (Maintenance)			
(Annual Standard)	, teaminene				
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Unclassifiable/Attainment			
(1 Hour Standard)					
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	_			
(24 Hour Standard)					
Lead (Pb)	_	Unclassifiable/Attainment			
(30 Day Standard)					
Lead (Pb)	Attainment	_			
(3 Month Standard)					
Sulfates (SO <sub>4-2</sub> )	Attainment	_			
(24 Hour Standard)	, and the second s				
Hydrogen Sulfide (H <sub>2</sub> S)		_			
(1 Hour Standard)					
Source: South Coast Air Quality Management	District, Air Quality Management Plan, 2016; U	nited States Environmental Protection Agency,			

Source: South Coast Air Quality Management District, Air Quality Management Plan, 2016; United States Environmental Protection Agency, Nonattainment Areas for Criteria Pollutants (Green Book), 2022.

The following is a list of SCAQMD 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 PM<sub>10</sub> emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM<sub>10</sub> 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.
- SCAQMD Rule 1301 (General) This rule is intended to provide that pre-construction review
  requirements to ensure that new or relocated facilities do not interfere with progress in
  attainment of the NAAQS, while future economic growth within the SCAQMD is not unnecessarily
  restricted. The specific air quality goal is to achieve no net increases from new or modified
  permitted sources of nonattainment air contaminants or their precursors. Rule 1301 also limits
  emission increases of ammonia, and Ozone Depleting Compounds (ODCs) from new, modified or
  relocated facilities by requiring the use of Best Available Control Technology (BACT).
- SCAQMD Rule 401 (Visible Emissions) A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
- Rule 2305 (Warehouse Indirect Source Rule) Rule 2305 was adopted by the SCAQMD Governing Board on May 7, 2021 to reduce NO<sub>x</sub> and particulate matter emissions associated with warehouses and mobile sources attracted to warehouses. This rule applies to all existing and proposed warehouses over 100,000 square feet located in the SCAQMD. Rule 2305 requires warehouse operators to track annual vehicle miles traveled associated with truck trips to and from the warehouse. These trip miles are used to calculate the warehouses WAIRE (Warehouse Actions and Investments to Reduce Emissions) Points Compliance Obligation. WAIRE Points are earned based on emission reduction measures and warehouse operators are required to submit an annual WAIRE Report which includes truck trip data and emission reduction measures. Reduction strategies listed in the WAIRE menu include acquire zero emission (ZE) or near zero emission (NZE) trucks; require ZE/NZE truck visits; require ZE yard trucks; install on-site ZE charging/fueling infrastructure; install onsite energy systems; and install filtration systems in residences, schools, and other buildings in the adjacent community. Warehouse operators that do not earn a sufficient number of WAIRE points to satisfy the WAIRE Points Compliance Obligation would be required to pay a mitigation fee. Funds from the mitigation fee will be used to incentivize the purchase of cleaner trucks and charging/fueling infrastructure in communities nearby.

#### 3.4 Local

#### City of Menifee General Plan

The City of Menifee General Plan contains the following goals and policies that address air quality:

#### Open Space & Conservation Element OSC-9 Air Quality

*Goal:* OSC-9: Reduced impacts to air quality at the local level by minimizing pollution and particulate matter.

#### Policies:

**OCS-9.1:** Meet state and federal clean air standards by minimizing particulate matter emissions from construction activities.

**OCS-9.2:** Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, wastewater treatment, and similar uses.

**OCS-9.3:** Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.

**OCS-9.5:** Comply with the mandatory requirements of Title 24 Part 1 of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building and Energy Efficiency Standards.

#### City of Menifee Design Guidelines – Appendix A: Industrial Good Neighbor Policies<sup>5</sup>

According to the City's Design Guidelines, the purpose of the Good Neighbor Policies (Policies) is to provide local government and developers with ways to address environmental and neighborhood compatibility issues associated with permitting warehouse, logistics and distribution facilities. The Policies were designed to promote economic vitality and sustainability of businesses, while still protecting the general health, safety, and welfare of the public and sensitive receptors within the City of Menifee. Sensitive receptors include residential neighborhoods, schools, public parks, playgrounds, day care centers, nursing homes, hospitals, and other public places where residents are most likely to spend time. The intent of the City of Menifee's Good Neighbor Policies, in siting new warehouse, logistics and distribution uses, include:

1. Minimize impacts to sensitive uses

 <sup>&</sup>lt;sup>5</sup> City of Menifee. (2022). Industrial Good Neighbor Policies. Retrieved from: <u>https://www.cityofmenifee.us/DocumentCenter/View/14902/Design-Guidelines\_Amended-March-2-2022?bidId=</u> (accessed August 2023).

- 2. Protect public health, safety, and welfare by regulating the design, location, and operation of facilities
- 3. Protect neighborhood character of adjacent communities

The Policies apply to all new warehouse, logistics and distribution facilities ("industrial uses"), excluding pending applications that have been deemed complete as the effective day of this policy, that include any building larger than 100,000 square feet in size or any sized building with more than 10 loading bays (dock-high). There are general performance standards, as well as site design, access and layout standards, signage and information standards, and environmental considerations, including air quality and noise and traffic.

# 4 SIGNIFICANCE CRITERIA AND METHODOLOGY

#### 4.1 Air Quality Thresholds

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a Project normally would have a significant effect on the environment and would require mitigation if it would meet any of the following criteria:

- 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.

#### SCAQMD Thresholds

The significance criteria established by SCAQMD may be relied upon to make the above determinations. According to the SCAQMD, 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 SCAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in <u>Table 6: South Coast Air Quality Management District Emissions Thresholds</u>.

Table 6: South Coast Air Quality Management District Emissions Thresholds						
Critoria Air Pollutants and Procursors Maximum Pounds Per Day						
Criteria Ali Poliutants and Precursors	Construction-Related	Operational-Related				
Reactive Organic Gases (ROG)	75	55				
Carbon Monoxide (CO)	550	550				
Nitrogen Oxides (NO <sub>x</sub> )	100	55				
Sulfur Oxides (SO <sub>x</sub> )	150	150				
Coarse Particulates (PM <sub>10</sub> )	150	150				
Fine Particulates (PM2.5)5555						
Source: South Coast Air Quality Management District. South Coast AOMD Air Quality Significance Thresholds						

#### Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the Project would also be subject to the ambient air quality standards. These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Project site are above state and federal CO standards (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 standards.

#### Localized Significance Thresholds

The SCAQMD also developed Local Significance Thresholds (LSTs) for emissions of NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> 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 without expecting to cause or substantially contribute to an exceedance of the most stringent state or federal ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, 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 Project site is located within SCAQMD SRA 24. <u>Table 7: Local Significance Thresholds for Construction/Operations</u> shows the LSTs for a 1-acre, 2-acre, 4-acre (interpolated), and 5-acre project in SRA 24. Because the nearest sensitive receptors are approximately 90 feet (27 meters) to the north of the Project site, the thresholds for distances of 25 meters or less are listed below (per SCAQMD guidance).

Table 7: Local Significance Thresholds for Construction/Operations							
Project Size	Maximum Pounds Per Day						
	NO <sub>x</sub>	СО	PM <sub>10</sub>	PM <sub>2.5</sub>			
1 Acre	118/118	602/602	4/1	3/1			
2 Acres	170/170	883/883	7/2	4/1			
4 Acres	237/237	1,346/1,346	11/3	7/2			
5 Acres	270/270	1,577/1,577	13/4	8/2			
NOx = Nitrogen Oxides; CO = Carbon Monoxide; PM <sub>10</sub> = Particulate Matter 10 microns in diameter or less; PM <sub>2.5</sub> = Particulate Matter 2.5 microns in diameter or less							
Source: South Coast Air Quality Management District, Localized Significance Threshold Methodology, July 2008.							

LSTs associated with all acreage categories are provided in <u>Table 7</u> for informational purposes. <u>Table 7</u> shows that the LSTs increase as acreages increase. It should be noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based on 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 construction and operational impacts associated with the Project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod 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 SCAQMD.

#### Construction

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.

Construction was modeled according to the following timeline:

- Demolition: February 1, 2024 to March 31, 2024
- Site Preparation: April 1, 2024 to May 15, 2024
- Grading: May 16, 2024 to June 30, 2024
- Building Construction and Infrastructure: July 1, 2024 to December 31, 2024
- Paving: January 1, 2025 to February 28, 2025
- Architectural Coating: January 1, 2025 to April 30, 2025

#### Operations

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 increases in operational emissions would be predominantly associated with motor vehicle use. Emissions from each of these categories are discussed below.

- Area Sources. Area source emissions would be generated due to consumer products, on-site equipment, architectural coating, and landscaping that were previously not present on the site. Consumer products are various solvents used in non-industrial applications, which emit VOCs during product use. These typically include cleaning supplies, kitchen aerosols, cosmetics, and toiletries. It should be noted that the default area source VOC emission factor developed for CalEEMod is based on a statewide factor and is not applicable to the project. The entire project would not use consumer products as specified by CalEEMod user guide. The warehouses include offices and may have small kitchen areas and bathrooms that would use cleaning products, however the majority of the square footage for the Project (99 percent) would be used for warehousing/distribution. Negligible quantities of personal care products, home, lawn, and garden products, disinfectants, sanitizers, polishes, cosmetics, and floor finishes would be used. As the CalEEMod consumer product rates are based on a statewide average, ROG emissions are likely overestimated for the proposed warehouse Project and therefore conservative.
- Energy Sources. Energy source emissions would be generated due to electricity and natural gas usage associated with the Project. Primary uses of electricity and natural gas by the Project would be for miscellaneous warehouse equipment, space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. Electricity usage was calculated outside of CalEEMod based on Project specific data provided by the applicant. Natural gas usage is based on default consumption rates in CalEEMod.
- 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<sub>X</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are all pollutants of regional concern. NO<sub>X</sub> and ROG react with sunlight to form O<sub>3</sub>, known as photochemical smog. Additionally, wind currents readily transport PM<sub>10</sub> and PM<sub>2.5</sub>. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions are based on the trip generation within the Traffic Study for the CADO Warehouse Project and incorporated into CalEEMod as recommended by the SCAQMD.

The Project generated traffic was obtained from the Project's Traffic Study prepared by Kimley-Horn and Associates (July 2022). Project trip generation from the Trip Generation Analysis is based on the following Institute of Transportation Engineers (ITE) land use category:

• ITE Land Use 155b, High-Cube Fulfillment Center – Sort (700.037 thousand square feet, 4,508 total daily vehicle trips, which include 135 truck trips).

The Project would generate 4,508 daily trips, which includes 4,373 passenger car trips and 135 truck trips. Passenger car/employee commute trip lengths use CalEEMod default lengths for projects in Riverside County. Truck trip lengths are assumed to average 33.2 miles one way.<sup>6</sup> Warehouse truck mix percentages are based on the SCAQMD Truck Trip Generation Study applied to ITE truck percentages.

- **Off-Road Equipment.** Operational off-road emissions would be generated by off-road cargo handling equipment used during operational activities. For this project it was assumed that the warehouses would include 14 forklifts and 2 off-highway trucks for loading and unloading goods per the SCAQMD *High Cube Warehouse Truck Trip Study White Paper*<sup>7</sup>. It should be noted that the Project does not include cold storage. Therefore, this analysis models the warehouses as unrefrigerated, and the Project would not include emissions from transport refrigeration units (TRUs).
- Emergency Backup Generators. As the Project warehouse is speculative, it is unknown whether emergency backup generators would be used. Backup generators would only be used in the event of a power failure and would not be part of the Project's normal daily operations. Nonetheless, emissions associated with this equipment were included to be conservative. Emissions from an emergency backup generator for each warehouse building were calculated separately from CalEEMod; refer to Appendix A. However, CalEEMod default emissions rates were used. If backup generators are required, the end user would be required to obtain a permit from the SCAQMD prior to installation. Emergency backup generators must meet SCAQMD's Best Available Control Technology (BACT) requirements and comply with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines), which would minimize emissions.

As discussed above, the SCAQMD provides significance thresholds for emissions associated with proposed 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 SCAQMD'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 federal or state ambient air quality standards

<sup>&</sup>lt;sup>6</sup> California Air Resources Board, Appendix B: Emissions Estimation Methodology for On-Road Diesel-Fueled Heavy-Duty Drayage Trucks at California Ports and Intermodal Rail Yards, 2007. Available at: https://ww3.arb.ca.gov/msei/onroad/downloads/drayage\_trucks/appbf.pdf

<sup>&</sup>lt;sup>7</sup> SCAQMD, High Cube Warehouse Truck Trip Study White Paper Summary of Business Survey Results, June 2014.

and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

According to the SCAQMD LST methodology, LSTs would apply to the operational phase of a project only if it includes area sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). However, the CalEEMod model outputs do not separate on- and off-site emissions for mobile sources. The on-site one-way trip length is conservatively anticipated to be 1.33 miles, which is approximately 4.0 percent of the 33.2-mile truck trip length modeled in CalEEMod.

# 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?

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the state and federal ambient air quality standards. 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 SCAQMD. The SCAQMD is required, pursuant to the FCAA, to reduce emissions of criteria pollutants for which the SCAB is in nonattainment. To reduce such emissions, the SCAQMD drafted the 2016 and 2022 AQMPs. The AQMPs establish a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The AQMPs are a regional and multi-agency effort including the SCAQMD, the CARB, the SCAG, and the EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2020 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 SCAQMD's 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 AQMP.
- **Consistency Criterion No. 2**: The Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

According to the SCAQMD'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 <u>Table 8</u> the Project would not exceed construction emission standards with Mitigation Measures (**MM**) **AQ-1**. As shown in <u>Table 10</u>, **MM AQ-2** and **MM AQ-3** would reduce operational NO<sub>x</sub> emissions to below operation emission standards. Thus, the Project would be consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMPs contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project's existing General Plan land use designation is Economic Development Corridor (EDC) Northern Gateway, and the Project's existing zoning

designation is Economic Development Corridor – Northern Gateway (EDC – NG). The Project's proposed land uses would be consistent with the EDC land use designation and the City's Zoning Code. Furthermore, the Project would also be designed consistently with all applicable planning policies and design standards as set forth within the Menifee Municipal Code.

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project would not result in a change of land use designations reflected in the AQMP. Therefore, the Project is assumed to be consistent with the AQMPs regional emissions inventory for the SCAB. Thus, the Project is consistent with the second criterion.

As noted above (and discussed further in Threshold 5.2, below), **MM AQ-1** through **MM AQ-5** would reduce construction and operational air pollutant emissions below SCAQMD's emission thresholds. Therefore, 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 AQMP. In addition, because the Project is consistent with land use projections that form the basis of the AQMPs, the Project would be consistent with the emissions forecasts in the AQMP.

Mitigation Measures: Mitigation Measures MM AQ-1 through MM AQ-5 (refer to Impact Threshold 5.2, below).

Level of Significance: Less than significant impact with mitigation incorporated.

# 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**

Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Project area include  $O_3$ -precursor pollutants (i.e. ROG and NO<sub>x</sub>) and PM<sub>10</sub> and PM<sub>2.5</sub>. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of 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.

Construction activities associated with the Project conservatively estimated to be completed within approximately 15 months. Construction-generated emissions associated with the Project 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 <u>Appendix A: Air Quality</u> <u>Modeling Data</u> for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Project are summarized in <u>Table 8:</u> <u>Construction-Related Emissions</u>.

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. SCAQMD 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. Standard Condition (SC) 1 requires the implementation of Rule 402 and 403 dust control techniques to minimize PM<sub>10</sub> and PM<sub>2.5</sub> concentrations. While impacts would be considered less than significant, the Project would be subject to SCAQMD Rules for reducing fugitive dust, described in the Regulatory Framework subsection above and identified in PPP-1.

<u>Table 8</u> shows that unmitigated construction emissions would exceed the SCAQMD threshold for  $PM_{10}$ . The majority of  $PM_{10}$  emissions are generated during the grading phase of construction and from construction vehicles accessing the Project site from unpaved roads. **MM AQ-1** requires all unpaved offsite access roads to either be stabilized using a chemical dust suppressant or paved prior to the start of the grading phase of construction. Implementation of mitigation measures would reduce construction  $PM_{10}$  emissions to below the SCAQMD's thresholds. Impacts would be less than significant with mitigation.

Table 8: Construction-Related Emissions						
Construction Voor	Emissions (Maximum Pounds Per Day)					
Construction Year	ROG	NOx	со	SO <sub>2</sub>	PM10	PM <sub>2.5</sub>
Unmitigated Emissions <sup>1</sup>						
Year 2024	4.52	92.53	47.41	0.37	245.19	26.80
Year 2025	43.62	10.05	21.92	0.04	2.27	0.92
SCAQMD Threshold	75	100	550	150	150	55
Exceed SCAQMD Threshold?	No	No	No	No	Yes	No
Mitigated Emissions <sup>1, 2, 3</sup>		·			·	•
Year 2024	3.37	77.22	47.41	0.37	47.62	26.26
Year 2025	42.84	1.67	21.92	0.04	1.84	0.53
SCAQMD Threshold	75	100	550	150	55	150
Exceed SCAQMD Threshold? No No No No No No						
ROG = Reactive Organic Gases; NO <sub>x</sub> = Nitrogen Oxides; CO = Carbon Monoxide; SO <sub>2</sub> = Sulfur Dioxide; PM <sub>10</sub> = Particulate Matter 10 microns in diameter or less; PM <sub>2.5</sub> = Particulate Matter 2.5 microns in diameter or less						

 SCAQMD 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. Reduction percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. Refer to Appendix A for Model Data Outputs.

2. Mitigation measure AQ-1 requires unpaved access roads either be stabilized with dust suppressing chemicals or paved prior to the grading phase of construction.

3. Although not required to meet SCAQMD NO<sub>x</sub> thresholds, the Health Risk Assessment determined that MM HRA-1 was necessary to reduce carcinogenic and non-carcinogenic health risks during construction. MM HRA-1 requires construction equipment to meet CARB Tier 4 Final standards. The results of MM HRA-1 have been included in Table 8 for informational purposes.

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

#### **Operational Emissions**

Project-generated emissions would be primarily associated with motor vehicle use and off-road cargo handling equipment such as forklifts and yard trucks. Long-term operational emissions attributable to the Project are summarized in <u>Table 9</u>: <u>Unmitigated Operational Project Emissions</u>. <u>Table 9</u> shows that Project emissions would exceed SCAQMD thresholds for NO<sub>X</sub>. Therefore, regional operations emissions would result in a potentially significant long-term regional air quality impact.

Table 9: Unmitigated Operational Project Emissions										
Source	Maximum Pounds Per Day									
	ROG	NOx	СО	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>				
Area Source Emissions	16.06	0.00	0.17	0.00	0.00	0.00				
Energy Emissions	0.04	0.38	0.32	0.00	0.03	0.03				
Mobile – Vehicle Emissions	11.90	25.61	102.28	0.30	27.30	7.55				
Off-Road – Forklifts	1.76	16.66	23.51	0.03	0.88	0.81				
Off-Road – Yard Trucks	1.02	8.83	9.94	0.02	0.42	0.39				
Back-up Generators	1.69	4.71	4.30	0.01	0.25	0.25				
Total Emissions	32.47	56.19	140.52	0.36	28.88	9.03				
SCAQMD Threshold	55	55	550	150	150	55				
Exceeds Threshold?	No	Yes	No	No	No	No				
ROG = Reactive Organic Gases; NOx = Nitrogen Oxides; CO = Carbon Monoxide; SO <sub>2</sub> = Sulfur Dioxide; PM <sub>10</sub> = Particulate Matter 10 microns in diameter or less; PM <sub>2.5</sub> = Particulate Matter 2.5 microns in diameter or less										
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.										

As noted above, <u>Table 9</u> shows that unmitigated operational Project emissions would exceed the SCAQMD thresholds for NO<sub>x</sub>. Mitigation measures would be required to reduce emissions to the maximum extent feasible; however, emissions of motor vehicles are controlled by State and Federal standards and the Project has no control over these standards. CARB is addressing emissions from heavy duty vehicles through various regulatory programs including lower emission standards, restrictions on idling, the use of post-combustion filter and catalyst equipment, and retrofits for diesel truck fleets. These programs are expected to result in significant reductions in ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and CO emissions as they are fully implemented by 2023.

Federal and State agencies regulate and enforce vehicle emission standards. It is not feasible for the City of Menifee to effectively enforce a prohibition on trucks from entering the property that are otherwise permitted to operate in California and access other properties in the City, region, and State. Even if the City were to apply such a restriction, it would cause warehouse operators using older truck fleets to travel to other facilities in the SCAB where the restriction does not apply, thereby resulting in no improvement to regional air quality. Based on data from CARB, most heavy-duty trucks entering the Project site would meet or exceed 2010 model year emission standards when the Project becomes fully operational in 2025 as all trucks are required to meet or exceed such standards by 2023. Specifically, according to CARB EMFAC inventories, approximately 50 percent of all instate heavy-duty trucks met the 2010 engine standard in 2019, 59 percent in 2020, and 62 percent in 2021. Additionally, 65 percent and 90 percent of trucks are projected to meet the 2010 engine standard in 2022 and 2023 respectively.<sup>8</sup>

<sup>&</sup>lt;sup>8</sup> California Air Resources Board, *EMFAC2017, An Update to California On-Road Mobile Source Emissions Inventory*, November 9, 2017. Available at: https://ww3.arb.ca.gov/msei/downloads/emfac2017\_workshop\_11\_09\_2017\_final.pdf, accessed March 29, 2022.

<u>Table 10: Mitigated Operational Project Emissions</u> shows operational emissions after incorporating operational mitigation measures. **MM AQ-3** requires the implementation of a Transportation Demand Management (TDM) program to reduce single occupant vehicle trips and encourage public transit. **MM AQ-4** requires that all forklifts used onsite are electric or employ other zero emission technology. **MM AQ-5** requires signage for on-site circulation and limiting idling emissions.

Table 10: Mitigated Operational Project Emissions									
6	Maximum Pounds Per Day								
Source	ROG	NOx	СО	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>			
Area Source Emissions	16.06	0.00	0.17	0.00	0.00	0.00			
Energy Emissions	0.04	0.38	0.32	0.00	0.03	0.03			
Mobile – Vehicle Emissions <sup>1</sup>	11.84	25.52	101.21	0.30	26.99	7.47			
Off-Road – Forklifts <sup>2</sup>	0.00	0.00	0.00	0.00	0.00	0.00			
Off-Road – Yard Trucks	1.02	8.83	9.94	0.02	0.42	0.39			
Back-up Generators	1.69	4.71	4.30	0.01	0.25	0.25			
Total Emissions	30.65	39.44	115.94	0.33	27.69	8.14			
SCAQMD Threshold	55	55	550	150	150	55			
Exceeds Threshold?	No	No	No	No	No	No			
ROG = Reactive Organic Gases; NO <sub>x</sub> = Nitrogen Oxides; CO = Carbon Monoxide; SO <sub>2</sub> = Sulfur Dioxide; PM <sub>10</sub> = Particulate Matter 10 microns in diameter or less; PM <sub>2.5</sub> = Particulate Matter 2.5 microns in diameter or less									
<ol> <li>Incorporates implementation of a Transportation Demand Management (TDM) program pursuant to MM AQ-2.</li> <li>MM AQ-3 requires all forklifts to be electric or use other zero emission technology.</li> </ol>									

<u>Table 10</u> shows that with the implementation of **MM AQ-3** through **MM AQ-5**, operational emissions for NO<sub>x</sub> would be reduced below the SCAQMD's thresholds, therefore impacts would be less than significant mitigation.

#### Cumulative Short-Term Emissions

The SCAB is designated nonattainment for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> for State standards and nonattainment for O<sub>3</sub> and PM<sub>2.5</sub> for Federal standards. Appendix D of the SCAQMD 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 SCAQMD 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. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable. As shown in Table 8, construction of the Project would exceed the SCAQMD significance thresholds for PM<sub>10</sub>. However, with the implementation of **MM AQ-1** and **MM AQ-2**, construction impacts would be reduced to less than significant levels. Therefore, the proposed Project would not generate a cumulatively considerable contribution to air pollutant emissions during construction.

#### **Cumulative Long-Term Impacts**

The SCAQMD 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 SCAQMD 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 SCAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in <u>Table 9</u>, the Project operational emissions (primarily from vehicle and forklift emissions) would exceed SCAQMD thresholds for NO<sub>x</sub>. However, with the implementation of **MM AQ-3** through **MM AQ-5**, operational impacts would be reduced to less than significant levels. Therefore, the proposed Project would not generate a cumulatively considerable long-term contribution to air pollutant emissions.

#### Plans, Programs, and Policies:

Existing requirements based on local, state, or federal regulations or laws are frequently required independently of CEQA review. Typical requirements include compliance with the provisions of the Building Code, CalGreen Code, local municipal code, SCAQMD Rules, etc. Because Plans, Programs, and Policies (PPP) are neither Project specific nor a result of development of the Project, they are not considered to be project design features or Mitigation Measures.

- PP-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 Air Quality Management District's (SCAQMD's) 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.
- **PPP-2** Pursuant to SCAQMD 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.

- **PPP-3** Require diesel powered construction equipment to turn off when not in use per Title 13 of the California Code of Regulations, Section 2449.
- **PPP-4** Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls and sensors for landscaping according to the City's Landscape Water Use Efficiency requirements (Chapter 15.04 of the City's Municipal Code).
- PPP-5 The Project shall be designed in accordance with the applicable Title 24 Energy Efficiency Standards for Nonresidential Buildings (California Code of Regulations [CCR], Title 24, 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 additional rooftop solar panels, they will submit plans for solar panels prior to occupancy.
- **PPP-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 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 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 5.410 (nonresidential) of the California Green Building Standards Code Part 11.
  - To facilitate future installation of electric vehicle supply equipment (EVSE), nonresidential construction shall comply with Section 5.106.5.3 (nonresidential electric vehicle charging) of the California Green Building Standards Code Part 11.
- PPP-7 Pursuant to SCAQMD Rule 2305, the Project operator will track annual vehicle miles traveled associated with truck trips to and from the warehouse. These trip miles are used to calculate the warehouses WAIRE Points Compliance Obligation. WAIRE Points are earned based on emission reduction measures listed in the WAIRE menu include acquire zero emission (ZE) or near zero emission (NZE) trucks; require ZE/NZE truck visits; require ZE yard trucks; install on-site ZE charging/fueling infrastructure; install onsite energy systems; and install filtration systems in residences, schools, and other buildings in the adjacent community. Warehouse operators that do not earn a sufficient number of WAIRE points to satisfy the WAIRE Points Compliance Obligation would be required to pay a mitigation fee.
**PPP-8** Trees shall be installed in automobile parking areas to provide 50 percent shade cover of parking areas within fifteen years in accordance with section 9.195.040 of the Menifee Municipal Code (Development Code). Trees shall be planted that are capable of meeting this requirement.

Mitigation Measures: The following mitigation is required.

- MM AQ-1 Prior to the issuance of grading or building permits, the City Engineer shall confirm that the Grading Plan, Building Plans and Specifications require all unpaved offsite access roads to either be stabilized using a chemical dust suppressant or paved prior to the start of the grading phase of construction.
- MM AQ-2The Project's contractors shall be prohibited from idling heavy equipment for more<br/>than three minutes and prohibited from being in the "on" position for more than 10<br/>hours per day. The Project's general contractor shall designate an officer to monitor<br/>the construction equipment operators on-site for compliance.
- MM AQ-3Prior to issuance of tenant occupancy permits (not building shell permits), the Project<br/>operator shall prepare and submit a Transportation Demand Management (TDM)<br/>program detailing strategies that would reduce the use of single-occupant vehicles by<br/>employees by increasing the number of trips by walking, bicycle, carpool, vanpool,<br/>and transit. The TDM shall include, but is not limited to the following:
  - Provide a transportation information center and on-site TDM coordinator to educate residents, employers, employees, and visitors of surrounding transportation options.
  - Incorporate bicycle parking and storage, and self-service bicycle repair areas.
  - Provide on-site meal options in employee break areas as well as kitchen amenities to prepare and/or heat meals.
  - Provide a ride-matching service (e.g., bulletin boards, website, smartphone application) to connect carpool participants and provide preferential parking for rideshare vehicles to support carpool/vanpool/rideshare transportation modes.
  - Post Riverside Transit Agency schedules in conspicuous areas.
  - Reference Riverside Transit Agency schedules when creating employees' operating schedules.
- MM AQ-4 All outdoor cargo handling equipment (such as yard trucks, hostlers, yard goats, pallet jacks, and forklifts) shall be zero emission (i.e., powered by electricity or other alternative fuels). The warehouse building shall include the necessary charging stations for cargo handling equipment. The building manager or their designee shall be responsible for enforcing these requirements.

- **MM AQ-5** Prior to the issuance of a tenant occupancy permit, the Community Development Department shall confirm that all truck access gates and loading docks within the project site shall have posted signage posted that states:
  - Truck drivers shall turn off engines when not in use.
  - Truck drivers shall shut down the engine after three minutes of continuous idling operation (pursuant to City of Menifee's Industrial Good Neighbor Policies). Once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.
  - Telephone numbers of the building facilities manager, the SCAQMD, and CARB to report violations.
  - Signs shall also inform truck drivers about the health effects of diesel particulates, the California Air Resources Board diesel idling regulations, and the importance of being a good neighbor by not parking in residential areas.
  - The Operator shall designate an officer to monitor trucks on-site for compliance.
  - To the extent feasible, the Project shall restrict the turns trucks can make entering and exiting the facility to route trucks away from sensitive receptors by posting signs at every truck exit driveway providing directional information to head northbound to Ethanac Road (designated truck route).
  - Signs and drive aisle pavement markings shall clearly identify the on-site circulation pattern to minimize unnecessary on-site vehicular travel.
  - All signage installed as part of the Project shall be legible, durable, and weatherproof.

**Level of Significance:** less than significant with mitigation. Construction emissions for the Project have been reduced to less than significant with the incorporation of **MM AQ-1** and **MM AQ-2**. Operational impacts from mobile sources and off-road equipment have been reduced to less than significant with the incorporation of **MM AQ-3** through **MM AQ-5**. No additional mitigation measures are required to reduce operational emission impacts to less than significant.

#### Threshold 5.3 Would the Project expose sensitive receptors to substantial pollutant concentrations?

#### Localized Construction Significance Analysis

The Project applicant proposes the development of approximately 700,037 SF of industrial warehouse space on a total of 36.8 net acres. The Project would include the construction of one concrete tilt-up building, parking lot, and offsite improvements. The Project is anticipated to be developed in one phase and construction is anticipated to occur over a period of approximately 14 months, beginning in 2024.

The nearest sensitive receptor to the Project are single-family residential buildings located approximately 90 feet (27 meters) to the north of the Project site. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized 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, <u>Table 11: Equipment-Specific Grading Rates</u> is used to determine the maximum daily disturbed acreage for comparison to LSTs. The appropriate SRA for the localized significance thresholds is the Perris Valley (SRA 24) since this area includes the Project. LSTs apply to NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Project construction is anticipated to disturb a maximum of 4.0 acres in a single day. As the LST guidance provides thresholds for projects disturbing 1-, 2-, and 5-acres in size and the thresholds increase with size of the site, the LSTs for a 4.0-acre threshold were interpolated and utilized for this analysis.

Table 11: Equipmer	t-Specific Grading	Rates			
Construction Phase	Equipment	Equipment	Acres Graded	Operating Hours	Acres Graded
	Туре	Quantity	per 8-Hour Day	per Day	per Day
	Tractors	2	0.5	8	1.0
	Graders	1	0.5	8	0.5
Grading	Dozers	1	0.5	8	Hours Acres Graded   y per Day   1.0 0.5   0.5 0.5   2.0 2.0   er Day 4.0
	Scrapers	2	1	8	2.0
			Total Ac	res Graded per Day	4.0
Source: Refer to Appendi	x A for model outputs.				

The SCAQMD'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 "onsite" emissions outputs were considered. The nearest sensitive receptor to the construction area are residential buildings located approximately 90 feet (27 meters) to the north of the Project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. SCAQMD's LST guidance recommends using the 25-meter threshold for receptors located 25 meters or less from the project site. Therefore, the LSTs for 4 acres at 25 meters were used for the construction analysis which is consistent with the SCAQMD LST methodology. <u>Table 12: Localized Significance of Construction Emissions</u> presents the localized emissions during each construction activity for the Project after incorporating mitigation measures required under Threshold 5.2. <u>Table 12</u> shows that emissions of these pollutants on the peak days of construction would not result in significant concentrations of pollutants at nearby sensitive receptors.

Air	Qua	lity	Assessmen	it
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Table 12: Localized Significance of Constr	Table 12: Localized Significance of Construction Emissions												
Construction Activity		Emissions (Maximu	um Pounds Per Day)										
construction Activity	NOx	со	PM10	PM <sub>2.5</sub>									
Demolition 2024	20.88	19.71	1.03	0.90									
Site Preparation 2024	27.18	18.34	8.90	5.07									
Grading 2024	32.38	27.72	5.15	2.69									
Building Construction 2024	13.44	16.17	0.61	0.58									
Paving 2025	8.58	14.58	0.41	0.39									
Architectural Coating 2025	1.15	1.81	0.05	0.05									
Paving and Architectural Coating Combined <sup>1</sup>	9.73	16.39	0.46	0.44									
SCAQMD Localized Screening Threshold (adjusted for 4.0 acres at 25 meters)	237	1,346	11	7									
Exceed SCAQMD Threshold?	No	No	No	No									
NO <sub>x</sub> = Nitrogen Oxides; CO = Carbon Monoxide; PM <sub>1</sub> microns in diameter or less	<sub>0</sub> = Particulate Matter	10 microns in diameter	or less; PM <sub>2.5</sub> = Particul	ate Matter 2.5									
1. Paving and Architectural Coating activities are sch	eduled to overlap, the	refore emissions from	both activities would oc	cur on the same day.									
Source: CalEEMod version 2020.4.0. Refer to Append	dix A for model output	s											

**Localized Operational Significance Analysis** 

According to the SCAQMD LST methodology, LSTs would apply to the operational phase of a project only if it includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). Since the Project includes warehouses, the operational phase LST protocol is conservatively applied to both the area source and a portion of the mobile source emissions for operations.

LSTs for receptors located at 25 meters in SRA 24 were utilized in this analysis of Project operations because the closest receptors to the Project area is located approximately 90 feet (27 meters) to the north and the thresholds increase with distance. Although the Project site is approximately 36.8 acres, the 5acre LST threshold was also conservatively used for the Project, as the LSTs increase with the size of the site.

The LST analysis only includes on-site sources. However, the CalEEMod model outputs do not separate on- and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 13: Localized Significance of Operational Emissions conservatively include all on-site Projectrelated stationary sources and four percent of project-related mobile sources (four percent of the daily VMT is approximately equal to the distance of each vehicle on-site driving around the perimeter of Project), since a portion of mobile sources could include trucks idling on-site. Table 13 shows that the maximum daily emissions of these pollutants for Project operations would not result in significant concentrations of pollutants at nearby sensitive receptors.

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Table 13: Localized Significance of Operational	Emissions								
A shinite .	Emissions (Maximum Pounds Per Day)								
Activity	NOx	со	PM10	PM <sub>2.5</sub>					
Area Sources and On-Site Generators and Mobile Sources <sup>1</sup>	14.56	18.46	1.75	0.94					
SCAQMD Localized Screening Threshold (adjusted for 5 acres at 25 meters)	270	1,577	4	2					
Exceed SCAQMD Threshold?	No	No	No	No					
NO <sub>x</sub> = Nitrogen Oxides; CO = Carbon Monoxide; PM <sub>10</sub> = Parti microns in diameter or less	culate Matter 10 m	icrons in diameter or	less; PM <sub>2.5</sub> = Particula	ate Matter 2.5					
1. Includes all on-site emissions and four percent of warehou	use mobile source e	emissions.							
Source: Caleelviou version 2020.4.0. Refer to Appendix A 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* (2018) 6 Cal.5<sup>th</sup> 502). The SCAQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme O<sub>3</sub> 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 SCAQMD Rule 1303 for new or modified sources. The NSR Program<sup>9</sup> 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 federal ambient air quality standards. The federal ambient air quality standards 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 SCAQMD'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  $O_3$  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  $O_3$  may be formed at a distance downwind from the sources. Breathing ground-level  $O_3$  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  $O_3$  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  $O_3$  can make asthma symptoms worse and can increase sensitivity to asthma triggers.

According to the SCAQMD's AQMPs, O<sub>3</sub>, NO<sub>x</sub>, 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<sub>x</sub> 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<sub>x</sub> emissions from electric utilities have also decreased due to the use of cleaner fuels and renewable energy. The 2022 AQMP demonstrates how the SCAQMD's control strategy to meet the 2015 O<sub>3</sub> standard by 2037 would lead to sufficient NO<sub>x</sub> emission reductions. In addition, since NO<sub>x</sub> emissions also lead to the formation of PM<sub>2.5</sub>,

<sup>&</sup>lt;sup>9</sup> 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)

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the  $NO_X$  reductions needed to meet the  $O_3$  standards will likewise lead to improvement of  $PM_{2.5}$  levels and attainment of  $PM_{2.5}$  standards.

The SCAQMD's air quality modeling demonstrates that NO<sub>x</sub> reductions prove to be much more effective in reducing O<sub>3</sub> levels and will also lead to significant improvement in PM<sub>2.5</sub> concentrations. NO<sub>x</sub>-emitting stationary sources regulated by the SCAQMD 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 AQMP identifies robust NO<sub>x</sub> 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<sub>x</sub> 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 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.

There are significant challenges with correlating specific health effects that will occur as a result of a project's significant criteria air pollutant emissions. Generally, models that correlate criteria air pollutant concentrations with specific health effects focus on regulatory decision-making that will apply throughout an entire air basin or region. These models focus on the region-wide health effects of pollutants so that regulators can assess the costs and benefits of adopting a proposed regulation that applies to an entire category of air pollutant sources, rather than the health effects related to emissions from a specific proposed project or source. Because of the scale of these analyses, any one project is likely to have only very small incremental effects which may be difficult to differentiate from the effects of air pollutant concentrations in an entire air basin. In addition, such modeling efforts are costly, and the value of a project-specific analysis may be modest in relation to that cost. Furthermore, the results, while costly to produce, may not be particularly useful. For regional pollutants, it is difficult to trace a particular project's criteria air pollutant emissions to a specific health effect. Moreover, the modeled results may be misleading because the margin of error in such modeling is large enough that, even if the modeled results report a given health effect, the model is sufficiently imprecise that the actual effect may differ from the reported results; that is, the modeled results suggest precision, when in fact available models cannot be that precise on a project level.

As discussed above, the mass emissions thresholds developed by SCAQMD and used by CEQA lead agencies throughout southern California to determine potential significance of project-related regional changes in the environment are not directly indicative of exceedances of applicable ambient air standards. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of  $O_3$  or PM. The effects on ground-level ambient concentrations of pollutants that may be breathed by people are also influenced by the spatial and temporal patterns of the emission sources. In other words, the effect on  $O_3$  and PM concentrations from a given mass of pollutants emitted in one location may vary from the effect if that same mass of pollutants was emitted in an entirely different location in the SCAB. The same effect may be observed when the daily and seasonal variation of emissions is taken into account. Regional-scale photochemical modeling, typically performed only for NAAQS attainment demonstration and rule promulgation, account for these changes in the spatial, temporal, and chemical nature of regional emissions.

Emissions from the construction and operation of the proposed Project would vary by time of day, month, and season, and the majority of Project-related emissions, being generated by mobile sources (cars and trucks) driving to and from the site, would be emitted throughout a wide area defined by the origins and destinations of people travelling to and from the proposed Project. As SCAQMD has stated "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region."<sup>10</sup>

Specifically, for extremely large regional projects, the SCAQMD states that it has been able to correlate potential health outcomes for very large emissions sources – as part of their rulemaking activity, specifically 6,620 pounds per day of NO<sub>X</sub> and 89,180 pounds per day of VOC were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to O<sub>3</sub>. Based on its recent experiences applying regional scale models to relatively small increase in emissions, SCAQMD stated in its Amicus Brief in the Sierra Club v. County of Fresno case: "[A] project emitting only 10 tons per year of NO<sub>X</sub> or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels."<sup>11</sup> The Brief makes it clear that SCAQMD does not believe that there must be a quantification of a project's health risks in CEQA documents prepared for individual projects. Any attempt to quantify the proposed Project's health risks would be considered unreliable and misleading. Also, the Project does not generate anywhere near 6,620 pounds per day of NO<sub>X</sub> or 89,190 pounds per day of ROG (VOC) emissions, which SCAQMD stated was a large enough emission to quantify O<sub>3</sub>-related health impacts. Therefore, the Project's emissions are not sufficiently high enough to use regional modeling program to correlate health effects on a basin-wide level.

As previously discussed, localized effects of on-site Project emissions on nearby receptors for the Project would be less than significant (refer to <u>Table 12</u> through <u>Table 13</u>). 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 SCAQMD based on the ambient concentrations of that pollutant for each SRA and distance to the nearest sensitive receptor. The ambient air quality standards 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 SCAQMD 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 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.

The NAAQS and CAAQS were developed to protect the most susceptible population groups from adverse health effects and were established in terms of parts per million or micrograms per cubic meter for the applicable emissions. As stated earlier, the mass emission thresholds were established primarily in conjunction with federal permitting "major source" thresholds. If emissions were below these "de minimis" emission rates, then the proposed Project is presumed to conform with the NAAQS.<sup>12</sup> While based on the status of an air basin level of attainment of the health-based NAAQS, emissions in excess of

<sup>&</sup>lt;sup>10</sup> South Coast Air Quality Management District, *Amicus Brief in Support of Neither Party, Sierra Club v. County of Fresno*, 2015.

<sup>&</sup>lt;sup>11</sup> South Coast Air Quality Management District, *Amicus Brief in Support of Neither Party, Sierra Club v. County of Fresno*, 2015. p. 1

<sup>&</sup>lt;sup>12</sup> US Environmental Protection Agency. Frequent Questions about General Conformity. Available: https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity. Accessed March 2022.

the mass emission thresholds from one project does not mean the air basin would experience measurably higher ground level concentrations, or more frequent occurrences of ground level concentrations in exceedance of standards, or delay timely attainment of a particular NAAQS.

O<sub>3</sub> 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. Due to the uncertainty in the relationship between project-level mass emissions and regional ozone formation as well as limitations with currently available technical tools, the resulting health effects associated with the Project cannot be identified. Given this is speculative, no meaningful conclusion can be drawn with respect to potential health effects from the criteria pollutant emissions of the proposed Project.

#### **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 SCAQMD's AQMP. The 2003 AQMP is the most recent version that addresses CO concentrations. As part of the SCAQMD *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 SCAQMD'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 4,508 additional vehicle trips attributable to the Project. Therefore, impacts would be less than significant.

#### **Construction and Operational Diesel Particulate Matter**

Project construction would result in the generation of DPM emissions from the use of required off-road diesel equipment required. Operational activities would also include the use of heavy-duty diesel trucks. 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 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., California Code of Regulations, Title 13, Sections 2485 and 2449), which reduce diesel PM 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 that 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) *Health Risk Assessment CADO Menifee Industrial Warehouse Project*, prepared by Kimley-Horn, 2024) was conducted based on the SCAQMD's Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis and the SCAQMD Risk Assessment Procedures and the guidance from OEHHA.

#### Construction Sources

Construction would generate DPM emissions from the use of off-road, heavy-duty diesel equipment for demolition; 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.

#### **Operational Sources**

<u>Mobile Sources</u>. The Project is located near existing residential uses. Due to the increased truck traffic from the Project, the resulting emissions could result in pollutant concentrations at existing sensitive receptors. Average daily trips from truck traffic to the Project were obtained from the Traffic Study for the Proposed CADO Warehouse Project (Kimley-Horn, 2022). An emission rate for PM<sub>10</sub> (DPM) was calculated using trip data and a CARB 2021 EMission FACtor model (EMFAC)<sup>13</sup> model run for Riverside County; refer to <u>Appendix A</u>. EMFAC generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of vehicle speed and

<sup>&</sup>lt;sup>13</sup> California Air Resources Board, *EMFAC 2021 Web Database*, www.arb.ca.gov/emfac accessed March 2022.

type. The model was run for heavy-duty diesel vehicles traveling along off-site roads, circulating the Project site, and idling at proposed loading docks.

<u>Off-Road Equipment</u>. Off-road cargo handling equipment (i.e., forklifts and yard trucks) used during operational activities. **MM AQ-4** requires all forklifts to be electrically powered or zero emissions. Emissions from other off-road cargo handling equipment, such as yard trucks are assumed to be diesel powered. Diesel off-road emission were calculated based on the CARB OFFROAD emissions inventory.

<u>Emergency Backup Generators</u>. As the Project warehouses are speculative, it is unknown whether emergency backup generators would be used. Backup generators would only be used in the event of a power failure and would not be part of the Project's normal daily operations. Nonetheless, emissions associated with this equipment were included to be conservative. If backup generators are required, the end user would be required to obtain a permit from the SCAQMD prior to installation. Emergency backup generators must meet SCAQMD's Best Available Control Technology (BACT) requirements and comply with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines), which would minimize emissions. *Dispersion Modeling* 

PM<sub>10</sub> exhaust construction emissions rates in grams per second were calculated from the total annual onsite exhaust emissions reported in CalEEMod during construction. Maximum (worst case) PM<sub>10</sub> exhaust construction 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, multiplesource, 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 Perris Monitoring Station provided by the SCAQMD 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 SCAQMD Modeling Guidance for AERMOD.<sup>14</sup>

Note that the concentration estimate developed using this methodology is 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 and equipment operating at specific distances during time periods of adverse meteorology. A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on these worst-case exposure duration scenarios. 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 location of the Project was assessed.

#### Risk and Hazard Assessment

Risk levels were calculated based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, *Air Toxics Hot Spots Program Risk Assessment Guidelines* (February 2015).

<sup>&</sup>lt;sup>14</sup> South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, http://www.aqmd.gov/home/airquality/meteorological-data/modeling-guidance, accessed March 2022.

SCAQMD'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.

Based on OEHHA *Risk Assessment Guidelines*, the exposure duration for a resident is 30 years, beginning with the third trimester; the exposure duration for workers is 25 years. Operations would commence following construction. As such, construction would not overlap with operations. The analysis calculates risk based on exposure to construction concentrations during the initial 15 months of the exposure duration and operational concentrations for the remainder of the exposure duration. Project emissions without mitigation would result in a maximum cancer risk of 13.94 in one million, which would exceed the SCAQMD threshold of 10 in one million. The incorporation of **MM HRA-1** which requires the use of Tier 4 construction equipment would reduce cancer risk to 1.80 in one million; refer to *Health Risk Assessment*. Therefore, impacts associated with carcinogenic risk would be less than significant.

A chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the chronic exposure by the reference exposure level. The chronic hazard was calculated based on the highest annual average concentration at the maximally exposed individual receptor. The highest maximum chronic hazard exposure associated with unmitigated DPM emissions from the Project would be 0.008. Therefore, chronic non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur. However, the maximum unmitigated acute hazard exposure would be 1.297. The incorporation of **MM HRA-1** which requires the use of Tier 4 construction equipment would reduce acute non-carcinogenic hazard exposure to 0.336 which is within acceptable limits. Impacts would be less than significant.

Mitigation Measures: Refer to MM AQ-1 through MM AQ-5 and MM HRA-1 in the Health Risk Assessment.

- **MM HRA-1** Prior to issuance of grading permits, the applicant shall prepare and submit documentation to the City of Menifee 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). These requirements 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 SCAQMD operating permit (if applicable) shall be provided to the City at the time of mobilization of each applicable unit of equipment.

Level of Significance: Less than significant impact with mitigation 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 SCAQMD Rule 402 to prevent odor nuisances on sensitive land uses. SCAQMD 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, emissions from construction equipment, such as diesel exhaust, and volatile organic compounds from architectural coatings and paving activities may generate odors. However, these odors would be temporary, are not expected to affect a substantial number of people and would disperse rapidly. Therefore, impacts related to odors associated with the Project's construction-related activities would be less than significant.

#### Operations

The SCAQMD *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 SCAQMD as odor sources. Therefore, the Project would not create objectionable odors.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than Significant.

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Appendix A

Air Quality Modeling Data

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

# CADO Warehouse Menifee No Mitigation

Riverside-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	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	690.04	1000sqft	15.84	690,037.00	0
Other Asphalt Surfaces	200.32	1000sqft	4.60	200,319.00	0
Parking Lot	717.24	1000sqft	16.47	717,240.00	0
City Park	6.28	Acre	6.28	273,885.00	0

# **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (Ib/MWhr)	390.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity ( (Ib/MWhr)	).004

# 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - landscape listed as city park, parking lot includes parking spaces and drive aisles, offsite improvements listed as other asphalt surface

Construction Phase - Applicant's Construction Schedule

Trips and VMT - nearest landfill - lambs canyon - 23 miles

On-road Fugitive Dust - access roads to site will remain unpaved (approx .1 mile) until paving phase

Demolition - structural demo area based on aerial photographs

Grading -

Architectural Coating - Rule 1113 VOC Building Envelope coatings =50

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

Vehicle Trips - trucks =135/690.037= 0.1956416829822169 passenger vehicles = 4,373/10 = 437.3, distribution trip length 33.2 SCAQMD Study Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Fleet Mix - Fleet Mix from Traffic Study Trip Gen

Water Mitigation - CA Building Code

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	55.00	86.00
tblConstructionPhase	NumDays	740.00	132.00
tblConstructionPhase	NumDays	50.00	42.00
tblConstructionPhase	NumDays	75.00	32.00
tblConstructionPhase	NumDays	55.00	43.00
tblConstructionPhase	NumDays	30.00	33.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.60
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.0740e-003	0.00
tblFleetMix	LHD2	7.0740e-003	0.17
tblFleetMix	МСҮ	0.02	0.00

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

tblFleetMix	MDV	0.14	0.00
tblFleetMix	МН	4.9320e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.23
tblFleetMix	OBUS	6.1000e-004	0.00
tblFleetMix	SBUS	1.0940e-003	0.00
tblFleetMix	UBUS	3.0400e-004	0.00
tblGrading	MaterialImported	0.00	145,000.00
tblLandUse	LandUseSquareFeet	690,040.00	690,037.00
tblLandUse	LandUseSquareFeet	200,320.00	200,319.00
tblLandUse	LandUseSquareFeet	273,556.80	273,885.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblTripsAndVMT	HaulingTripLength	20.00	23.00
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CNW_TL	6.90	33.20
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	33.00	0.00

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

tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.21	437.30
tblVehicleTrips	ST_TR	1.74	0.20
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.70	437.30
tblVehicleTrips	SU_TR	1.74	0.20
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.74	437.30
tblVehicleTrips	WD_TR	1.74	0.20

# 2.0 Emissions Summary

# 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/d	day				
2024	4.5231	89.1399	47.4104	0.3699	245.2575	2.0151	245.9979	26.2980	1.8788	26.9952	0.0000	38,895.66 92	38,895.66 92	2.4455	5.1571	40,493.63 49
2025	43.6189	10.0406	21.9214	0.0418	1.9449	0.4783	2.4232	0.5158	0.4441	0.9599	0.0000	4,105.171 8	4,105.171 8	0.7617	0.0354	4,134.760 7
Maximum	43.6189	89.1399	47.4104	0.3699	245.2575	2.0151	245.9979	26.2980	1.8788	26.9952	0.0000	38,895.66 92	38,895.66 92	2.4455	5.1571	40,493.63 49

# Mitigated Construction

	ROG	NOx	СО	SO2	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/c	day				
2024	4.5231	89.1399	47.4104	0.3699	244.4462	2.0151	245.1866	26.0989	1.8788	26.7960	0.0000	38,895.66 91	38,895.66 91	2.4455	5.1571	40,493.63 49
2025	43.6189	10.0406	21.9214	0.0418	1.7927	0.4783	2.2710	0.4785	0.4441	0.9226	0.0000	4,105.171 8	4,105.171 8	0.7617	0.0354	4,134.760 7
Maximum	43.6189	89.1399	47.4104	0.3699	244.4462	2.0151	245.1866	26.0989	1.8788	26.7960	0.0000	38,895.66 91	38,895.66 91	2.4455	5.1571	40,493.63 49

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.39	0.00	0.39	0.88	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00

# 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	СО	SO2	Fugitive 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/d	day							lb/c	lay		
Area	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Energy	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285
Mobile	11.8966	24.2266	102.2790	0.3008	26.9675	0.3290	27.2965	7.2374	0.3112	7.5486		30,964.34 92	30,964.34 92	1.2781	2.2463	31,665.68 92
Total	28.0014	24.6099	102.7650	0.3031	26.9675	0.3586	27.3261	7.2374	0.3408	7.5782		31,422.81 07	31,422.81 07	1.2878	2.2547	32,126.89 61

# Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive 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/d	day							lb/c	lay		
Area	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Energy	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285
Mobile	11.8966	24.2266	102.2790	0.3008	26.9675	0.3290	27.2965	7.2374	0.3112	7.5486		30,964.34 92	30,964.34 92	1.2781	2.2463	31,665.68 92
Total	28.0014	24.6099	102.7650	0.3031	26.9675	0.3586	27.3261	7.2374	0.3408	7.5782		31,422.81 07	31,422.81 07	1.2878	2.2547	32,126.89 61

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

# **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2024	3/31/2024	5	42	
2	Site Preparation	Site Preparation	4/1/2024	5/15/2024	5	33	
3	Grading	Grading	5/16/2024	6/30/2024	5	32	
4	Building Construction	Building Construction	7/1/2024	12/31/2024	5	132	
5	Paving	Paving	1/1/2025	2/28/2025	5	43	
6	Architectural Coating	Architectural Coating	1/1/2025	4/30/2025	5	86	

Acres of Grading (Site Preparation Phase): 49.5

Acres of Grading (Grading Phase): 96

Acres of Paving: 21.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,056; Non-Residential Outdoor: 350,019; Striped Parking Area: 55,054 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	36.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	18,125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	793.00	310.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	159.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

# **3.1 Mitigation Measures Construction**

Water Exposed Area

Water Unpaved Roads

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

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

# 3.2 Demolition - 2024

**Unmitigated Construction On-Site** 

	ROG	NOx	со	SO2	Fugitive 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/o	day							lb/d	day		
Fugitive Dust					0.1887	0.0000	0.1887	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602	1 1 1 1	0.8922	0.8922		3,747.422 8	3,747.422 8	1.0485		3,773.634 5
Total	2.2437	20.8781	19.7073	0.0388	0.1887	0.9602	1.1488	0.0286	0.8922	0.9208		3,747.422 8	3,747.422 8	1.0485		3,773.634 5

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

# 3.2 Demolition - 2024

# **Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	1.9800e- 003	0.0962	0.0250	5.3000e- 004	0.3073	1.1800e- 003	0.3084	0.0337	1.1300e- 003	0.0348		56.4825	56.4825	8.6000e- 004	8.9000e- 003	59.1568
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	0.0510	0.0301	0.5130	1.4300e- 003	3.4113	7.5000e- 004	3.4120	0.3679	6.9000e- 004	0.3686		144.3160	144.3160	3.1200e- 003	3.2700e- 003	145.3683
Total	0.0530	0.1263	0.5380	1.9600e- 003	3.7185	1.9300e- 003	3.7204	0.4016	1.8200e- 003	0.4034		200.7986	200.7986	3.9800e- 003	0.0122	204.5252

#### **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/e	day							lb/c	lay		
Fugitive Dust			1 1 1		0.0736	0.0000	0.0736	0.0111	0.0000	0.0111			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602	1 1 1	0.8922	0.8922	0.0000	3,747.422 8	3,747.422 8	1.0485		3,773.634 5
Total	2.2437	20.8781	19.7073	0.0388	0.0736	0.9602	1.0337	0.0111	0.8922	0.9033	0.0000	3,747.422 8	3,747.422 8	1.0485		3,773.634 5

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

# 3.2 Demolition - 2024

# Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive 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/d	day							lb/d	day		
Hauling	1.9800e- 003	0.0962	0.0250	5.3000e- 004	0.3061	1.1800e- 003	0.3073	0.0334	1.1300e- 003	0.0345		56.4825	56.4825	8.6000e- 004	8.9000e- 003	59.1568
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	0.0510	0.0301	0.5130	1.4300e- 003	3.3983	7.5000e- 004	3.3990	0.3647	6.9000e- 004	0.3654		144.3160	144.3160	3.1200e- 003	3.2700e- 003	145.3683
Total	0.0530	0.1263	0.5380	1.9600e- 003	3.7044	1.9300e- 003	3.7063	0.3981	1.8200e- 003	0.3999		200.7986	200.7986	3.9800e- 003	0.0122	204.5252

# 3.3 Site Preparation - 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/e	day							lb/d	day		
Fugitive Dust		1 1 1			19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	19.6570	1.2294	20.8864	10.1025	1.1310	11.2335		3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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

# 3.3 Site Preparation - 2024

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	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	0.0613	0.0362	0.6156	1.7100e- 003	4.0935	9.0000e- 004	4.0944	0.4415	8.3000e- 004	0.4423		173.1792	173.1792	3.7500e- 003	3.9200e- 003	174.4420
Total	0.0613	0.0362	0.6156	1.7100e- 003	4.0935	9.0000e- 004	4.0944	0.4415	8.3000e- 004	0.4423		173.1792	173.1792	3.7500e- 003	3.9200e- 003	174.4420

# **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/o	day							lb/c	lay		
Fugitive Dust		1 1 1	1 1 1		7.6662	0.0000	7.6662	3.9400	0.0000	3.9400		1 1 1	0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294	1 1 1	1.1310	1.1310	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	7.6662	1.2294	8.8956	3.9400	1.1310	5.0710	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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

# 3.3 Site Preparation - 2024

# **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0613	0.0362	0.6156	1.7100e- 003	4.0779	9.0000e- 004	4.0788	0.4377	8.3000e- 004	0.4385		173.1792	173.1792	3.7500e- 003	3.9200e- 003	174.4420
Total	0.0613	0.0362	0.6156	1.7100e- 003	4.0779	9.0000e- 004	4.0788	0.4377	8.3000e- 004	0.4385		173.1792	173.1792	3.7500e- 003	3.9200e- 003	174.4420

# 3.4 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/e	day							lb/d	day		
Fugitive Dust					9.7774	0.0000	9.7774	3.7407	0.0000	3.7407			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.748 7	6,009.748 7	1.9437		6,058.340 5
Total	3.2181	32.3770	27.7228	0.0621	9.7774	1.3354	11.1128	3.7407	1.2286	4.9692		6,009.748 7	6,009.748 7	1.9437		6,058.340 5

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

# 3.4 Grading - 2024

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	1.2369	56.7228	15.7265	0.3059	176.5514	0.6787	177.2301	19.3351	0.6493	19.9845		32,693.49 91	32,693.49 91	0.4977	5.1528	34,241.47 00
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	0.0681	0.0402	0.6840	1.9000e- 003	4.5483	1.0000e- 003	4.5493	0.4906	9.2000e- 004	0.4915		192.4214	192.4214	4.1600e- 003	4.3600e- 003	193.8244
Total	1.3049	56.7630	16.4106	0.3078	181.0998	0.6797	181.7794	19.8257	0.6503	20.4759		32,885.92 05	32,885.92 05	0.5018	5.1571	34,435.29 44

# 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/o	day							lb/c	lay		
Fugitive Dust			1 1 1		3.8132	0.0000	3.8132	1.4589	0.0000	1.4589		1 1 1	0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354	1 1 1	1.2286	1.2286	0.0000	6,009.748 7	6,009.748 7	1.9437		6,058.340 5
Total	3.2181	32.3770	27.7228	0.0621	3.8132	1.3354	5.1486	1.4589	1.2286	2.6874	0.0000	6,009.748 7	6,009.748 7	1.9437		6,058.340 5

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

# 3.4 Grading - 2024

# **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Hauling	1.2369	56.7228	15.7265	0.3059	175.8842	0.6787	176.5629	19.1713	0.6493	19.8207		32,693.49 91	32,693.49 91	0.4977	5.1528	34,241.47 00
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	0.0681	0.0402	0.6840	1.9000e- 003	4.5310	1.0000e- 003	4.5320	0.4863	9.2000e- 004	0.4872		192.4214	192.4214	4.1600e- 003	4.3600e- 003	193.8244
Total	1.3049	56.7630	16.4106	0.3078	180.4152	0.6797	181.0949	19.6577	0.6503	20.3079		32,885.92 05	32,885.92 05	0.5018	5.1571	34,435.29 44

# 3.5 Building Construction - 2024

# Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	1 1 1	0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

# 3.5 Building Construction - 2024

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.3439	10.1287	4.1224	0.0533	64.9156	0.0876	65.0033	6.8472	0.0838	6.9310		5,654.883 0	5,654.883 0	0.0606	0.8344	5,905.038 9
Worker	2.6983	1.5936	27.1212	0.0755	180.3418	0.0395	180.3814	19.4508	0.0364	19.4872		7,629.506 9	7,629.506 9	0.1650	0.1728	7,685.138 2
Total	3.0423	11.7223	31.2436	0.1288	245.2575	0.1272	245.3846	26.2980	0.1202	26.4183		13,284.38 98	13,284.38 98	0.2256	1.0072	13,590.17 72

#### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive 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/o	day							lb/d	lay		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	1 1 1	0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

# 3.5 Building Construction - 2024

# **Mitigated Construction Off-Site**

	ROG	NOx	со	SO2	Fugitive 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/e	day							lb/d	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	0.3439	10.1287	4.1224	0.0533	64.7909	0.0876	64.8785	6.8166	0.0838	6.9004		5,654.883 0	5,654.883 0	0.0606	0.8344	5,905.038 9
Worker	2.6983	1.5936	27.1212	0.0755	179.6552	0.0395	179.6948	19.2823	0.0364	19.3187		7,629.506 9	7,629.506 9	0.1650	0.1728	7,685.138 2
Total	3.0423	11.7223	31.2436	0.1288	244.4462	0.1272	244.5733	26.0989	0.1202	26.2191		13,284.38 98	13,284.38 98	0.2256	1.0072	13,590.17 72

# 3.6 Paving - 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/e	day							lb/c	lay		
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	1.2838					0.0000	0.0000	1	0.0000	0.0000			0.0000			0.0000
Total	2.1990	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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

# 3.6 Paving - 2025

# 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														
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	0.0477	0.0270	0.4771	1.3800e- 003	0.1677	7.1000e- 004	0.1684	0.0445	6.5000e- 004	0.0451		139.3947	139.3947	2.8100e- 003	3.0500e- 003	140.3742
Total	0.0477	0.0270	0.4771	1.3800e- 003	0.1677	7.1000e- 004	0.1684	0.0445	6.5000e- 004	0.0451		139.3947	139.3947	2.8100e- 003	3.0500e- 003	140.3742

# 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/c	lay		
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	1.2838					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.1990	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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

# 3.6 Paving - 2025

# **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	0.0477	0.0270	0.4771	1.3800e- 003	0.1546	7.1000e- 004	0.1553	0.0413	6.5000e- 004	0.0419		139.3947	139.3947	2.8100e- 003	3.0500e- 003	140.3742				
Total	0.0477	0.0270	0.4771	1.3800e- 003	0.1546	7.1000e- 004	0.1553	0.0413	6.5000e- 004	0.0419		139.3947	139.3947	2.8100e- 003	3.0500e- 003	140.3742				

# 3.7 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	40.6959	1 1 1				0.0000	0.0000	1 1 1	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	40.8668	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319				

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

# 3.7 Architectural Coating - 2025

# 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	0.5055	0.2864	5.0572	0.0146	1.7773	7.5200e- 003	1.7848	0.4713	6.9200e- 003	0.4783		1,477.583 9	1,477.583 9	0.0298	0.0323	1,487.966 8			
Total	0.5055	0.2864	5.0572	0.0146	1.7773	7.5200e- 003	1.7848	0.4713	6.9200e- 003	0.4783		1,477.583 9	1,477.583 9	0.0298	0.0323	1,487.966 8			

#### **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	40.6959					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	0.0000	281.4481	281.4481	0.0154		281.8319				
Total	40.8668	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319				

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

# 3.7 Architectural Coating - 2025

# 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	0.5055	0.2864	5.0572	0.0146	1.6382	7.5200e- 003	1.6457	0.4372	6.9200e- 003	0.4441		1,477.583 9	1,477.583 9	0.0298	0.0323	1,487.966 8			
Total	0.5055	0.2864	5.0572	0.0146	1.6382	7.5200e- 003	1.6457	0.4372	6.9200e- 003	0.4441		1,477.583 9	1,477.583 9	0.0298	0.0323	1,487.966 8			

# 4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile
#### 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/e	day							lb/c	lay		
Mitigated	11.8966	24.2266	102.2790	0.3008	26.9675	0.3290	27.2965	7.2374	0.3112	7.5486		30,964.34 92	30,964.34 92	1.2781	2.2463	31,665.68 92
Unmitigated	11.8966	24.2266	102.2790	0.3008	26.9675	0.3290	27.2965	7.2374	0.3112	7.5486		30,964.34 92	30,964.34 92	1.2781	2.2463	31,665.68 92

# 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	te	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	4,373.00	4,373.00	4373.00	10,937,065	10,937,065
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	135.00	135.00	135.00	1,631,455	1,631,455
Total	4,508.00	4,508.00	4,508.00	12,568,521	12,568,521

### 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
General Office Building	16.60	8.40	6.90	0.00	100.00	0.00	77	19	4
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	33.20	0.00	0.00	100.00	100	0	0

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
General Office Building	0.577845	0.056458	0.173793	0.136090	0.025268	0.000000	0.000000	0.000000	0.000610	0.000304	0.023606	0.001094	0.004932
Other Asphalt Surfaces	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Parking Lot	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.170000	0.230000	0.600000	0.000000	0.000000	0.000000	0.000000	0.000000

# 5.0 Energy Detail

#### Historical Energy Use: N

# 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
NaturalGas Mitigated	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285
NaturalGas Unmitigated	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

### 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**

	NaturalGa s Use	ROG	NOx	со	SO2	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/o	day							lb/d	day		
City Park	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
General Office Building	93.9726	1.0100e- 003	9.2100e- 003	7.7400e- 003	6.0000e- 005		7.0000e- 004	7.0000e- 004		7.0000e- 004	7.0000e- 004		11.0556	11.0556	2.1000e- 004	2.0000e- 004	11.1213
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail	3799.93	0.0410	0.3725	0.3129	2.2400e- 003		0.0283	0.0283		0.0283	0.0283		447.0506	447.0506	8.5700e- 003	8.2000e- 003	449.7072
Total		0.0420	0.3818	0.3207	2.3000e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

### 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

	NaturalGa s Use	ROG	NOx	СО	SO2	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/e	day							lb/c	day		
City Park	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
General Office Building	0.0939726	1.0100e- 003	9.2100e- 003	7.7400e- 003	6.0000e- 005		7.0000e- 004	7.0000e- 004		7.0000e- 004	7.0000e- 004		11.0556	11.0556	2.1000e- 004	2.0000e- 004	11.1213
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail	3.79993	0.0410	0.3725	0.3129	2.2400e- 003		0.0283	0.0283		0.0283	0.0283		447.0506	447.0506	8.5700e- 003	8.2000e- 003	449.7072
Total		0.0420	0.3818	0.3207	2.3000e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

# 6.0 Area Detail

6.1 Mitigation Measures Area

### EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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/e	day							lb/d	day		
Mitigated	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Unmitigated	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004	 - - -	5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

# 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/o	day							lb/e	day		
Architectural Coating	1.8478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.1998					0.0000	0.0000		0.0000	0.0000		 - - - -	0.0000			0.0000
Landscaping	0.0152	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004	1	5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Total	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

### 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/e	day							lb/e	day		
Architectural Coating	1.8478	1 1 1				0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Consumer Products	14.1998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0152	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Total	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

# 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

## **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

#### User Defined Equipment

Equipment Type

Number

### **11.0 Vegetation**

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

### CADO Warehouse Menifee No Mitigation

**Riverside-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	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	690.04	1000sqft	15.84	690,037.00	0
Other Asphalt Surfaces	200.32	1000sqft	4.60	200,319.00	0
Parking Lot	717.24	1000sqft	16.47	717,240.00	0
City Park	6.28	Acre	6.28	273,885.00	0

### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (Ib/MWhr)	390.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity 0 (Ib/MWhr)	.004

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - landscape listed as city park, parking lot includes parking spaces and drive aisles, offsite improvements listed as other asphalt surface

Construction Phase - Applicant's Construction Schedule

Trips and VMT - nearest landfill - lambs canyon - 23 miles

On-road Fugitive Dust - access roads to site will remain unpaved (approx .1 mile) until paving phase

Demolition - structural demo area based on aerial photographs

Grading -

Architectural Coating - Rule 1113 VOC Building Envelope coatings =50

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

Vehicle Trips - trucks =135/690.037= 0.1956416829822169 passenger vehicles = 4,373/10 = 437.3, distribution trip length 33.2 SCAQMD Study Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Fleet Mix - Fleet Mix from Traffic Study Trip Gen

Water Mitigation - CA Building Code

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	55.00	86.00
tblConstructionPhase	NumDays	740.00	132.00
tblConstructionPhase	NumDays	50.00	42.00
tblConstructionPhase	NumDays	75.00	32.00
tblConstructionPhase	NumDays	55.00	43.00
tblConstructionPhase	NumDays	30.00	33.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.60
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.0740e-003	0.00
tblFleetMix	LHD2	7.0740e-003	0.17
tblFleetMix	МСҮ	0.02	0.00

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

tblFleetMix	MDV	0.14	0.00
tblFleetMix	МН	4.9320e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.23
tblFleetMix	OBUS	6.1000e-004	0.00
tblFleetMix	SBUS	1.0940e-003	0.00
tblFleetMix	UBUS	3.0400e-004	0.00
tblGrading	MaterialImported	0.00	145,000.00
tblLandUse	LandUseSquareFeet	690,040.00	690,037.00
tblLandUse	LandUseSquareFeet	200,320.00	200,319.00
tblLandUse	LandUseSquareFeet	273,556.80	273,885.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblTripsAndVMT	HaulingTripLength	20.00	23.00
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CNW_TL	6.90	33.20
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	33.00	0.00

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

tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.21	437.30
tblVehicleTrips	ST_TR	1.74	0.20
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.70	437.30
tblVehicleTrips	SU_TR	1.74	0.20
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.74	437.30
tblVehicleTrips	WD_TR	1.74	0.20

# 2.0 Emissions Summary

### 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	со	SO2	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/d	day							lb/c	lay		
2024	4.4190	92.5256	44.3311	0.3702	245.2575	2.0160	245.9982	26.2980	1.8797	26.9954	0.0000	38,928.94 94	38,928.94 94	2.4407	5.1654	40,529.24 37
2025	43.5873	10.0521	20.8889	0.0403	1.9449	0.4783	2.4232	0.5158	0.4441	0.9599	0.0000	3,953.998 4	3,953.998 4	0.7617	0.0362	3,983.830 8
Maximum	43.5873	92.5256	44.3311	0.3702	245.2575	2.0160	245.9982	26.2980	1.8797	26.9954	0.0000	38,928.94 94	38,928.94 94	2.4407	5.1654	40,529.24 37

### Mitigated Construction

	ROG	NOx	СО	SO2	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/d	day							lb/c	day		
2024	4.4190	92.5256	44.3311	0.3702	244.4462	2.0160	245.1869	26.0989	1.8797	26.7963	0.0000	38,928.94 94	38,928.94 94	2.4407	5.1654	40,529.24 37
2025	43.5873	10.0521	20.8889	0.0403	1.7927	0.4783	2.2710	0.4785	0.4441	0.9226	0.0000	3,953.998 4	3,953.998 4	0.7617	0.0362	3,983.830 8
Maximum	43.5873	92.5256	44.3311	0.3702	244.4462	2.0160	245.1869	26.0989	1.8797	26.7963	0.0000	38,928.94 94	38,928.94 94	2.4407	5.1654	40,529.24 37

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.39	0.00	0.39	0.88	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00

### 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	СО	SO2	Fugitive 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/d	day							lb/c	lay		
Area	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Energy	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285
Mobile	9.9537	25.6124	92.0198	0.2845	26.9675	0.3291	27.2966	7.2374	0.3113	7.5488		29,319.22 43	29,319.22 43	1.3193	2.2704	30,028.79 62
Total	26.0585	25.9957	92.5059	0.2868	26.9675	0.3587	27.3262	7.2374	0.3409	7.5784		29,777.68 59	29,777.68 59	1.3290	2.2788	30,490.00 31

#### Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive 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/d	day							lb/c	lay		
Area	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Energy	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285
Mobile	9.9537	25.6124	92.0198	0.2845	26.9675	0.3291	27.2966	7.2374	0.3113	7.5488		29,319.22 43	29,319.22 43	1.3193	2.2704	30,028.79 62
Total	26.0585	25.9957	92.5059	0.2868	26.9675	0.3587	27.3262	7.2374	0.3409	7.5784		29,777.68 59	29,777.68 59	1.3290	2.2788	30,490.00 31

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

# **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2024	3/31/2024	5	42	
2	Site Preparation	Site Preparation	4/1/2024	5/15/2024	5	33	
3	Grading	Grading	5/16/2024	6/30/2024	5	32	
4	Building Construction	Building Construction	7/1/2024	12/31/2024	5	132	
5	Paving	Paving	1/1/2025	2/28/2025	5	43	
6	Architectural Coating	Architectural Coating	1/1/2025	4/30/2025	5	86	

Acres of Grading (Site Preparation Phase): 49.5

Acres of Grading (Grading Phase): 96

Acres of Paving: 21.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,056; Non-Residential Outdoor: 350,019; Striped Parking Area: 55,054 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	36.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	18,125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	793.00	310.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	159.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### **3.1 Mitigation Measures Construction**

Water Exposed Area

Water Unpaved Roads

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

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

### 3.2 Demolition - 2024

**Unmitigated Construction On-Site** 

	ROG	NOx	со	SO2	Fugitive 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/o	day							lb/d	day		
Fugitive Dust					0.1887	0.0000	0.1887	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602	1 1 1 1	0.8922	0.8922		3,747.422 8	3,747.422 8	1.0485		3,773.634 5
Total	2.2437	20.8781	19.7073	0.0388	0.1887	0.9602	1.1488	0.0286	0.8922	0.9208		3,747.422 8	3,747.422 8	1.0485		3,773.634 5

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

### 3.2 Demolition - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	1.8300e- 003	0.1018	0.0255	5.3000e- 004	0.3073	1.1800e- 003	0.3084	0.0337	1.1300e- 003	0.0348		56.5602	56.5602	8.5000e- 004	8.9100e- 003	59.2380
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	0.0313	0.4168	1.2900e- 003	3.4113	7.5000e- 004	3.4120	0.3679	6.9000e- 004	0.3686		130.7890	130.7890	3.1200e- 003	3.3500e- 003	131.8638
Total	0.0498	0.1331	0.4423	1.8200e- 003	3.7185	1.9300e- 003	3.7204	0.4016	1.8200e- 003	0.4034		187.3492	187.3492	3.9700e- 003	0.0123	191.1017

#### 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/o	day							lb/c	day		
Fugitive Dust		, , ,			0.0736	0.0000	0.0736	0.0111	0.0000	0.0111			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922	0.0000	3,747.422 8	3,747.422 8	1.0485		3,773.634 5
Total	2.2437	20.8781	19.7073	0.0388	0.0736	0.9602	1.0337	0.0111	0.8922	0.9033	0.0000	3,747.422 8	3,747.422 8	1.0485		3,773.634 5

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

### 3.2 Demolition - 2024

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	1.8300e- 003	0.1018	0.0255	5.3000e- 004	0.3061	1.1800e- 003	0.3073	0.0334	1.1300e- 003	0.0345		56.5602	56.5602	8.5000e- 004	8.9100e- 003	59.2380
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	0.0313	0.4168	1.2900e- 003	3.3983	7.5000e- 004	3.3990	0.3647	6.9000e- 004	0.3654		130.7890	130.7890	3.1200e- 003	3.3500e- 003	131.8638
Total	0.0498	0.1331	0.4423	1.8200e- 003	3.7044	1.9300e- 003	3.7063	0.3981	1.8200e- 003	0.3999		187.3492	187.3492	3.9700e- 003	0.0123	191.1017

### 3.3 Site Preparation - 2024

### Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive 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/d	day							lb/c	lay		
Fugitive Dust		1 1 1			19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	19.6570	1.2294	20.8864	10.1025	1.1310	11.2335		3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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

### 3.3 Site Preparation - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	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	0.0576	0.0375	0.5001	1.5500e- 003	4.0935	9.0000e- 004	4.0944	0.4415	8.3000e- 004	0.4423		156.9468	156.9468	3.7400e- 003	4.0100e- 003	158.2365
Total	0.0576	0.0375	0.5001	1.5500e- 003	4.0935	9.0000e- 004	4.0944	0.4415	8.3000e- 004	0.4423		156.9468	156.9468	3.7400e- 003	4.0100e- 003	158.2365

### 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/o	day							lb/c	lay		
Fugitive Dust		1 1 1	1 1 1		7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294	1 1 1	1.1310	1.1310	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	7.6662	1.2294	8.8956	3.9400	1.1310	5.0710	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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

### 3.3 Site Preparation - 2024

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	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	0.0576	0.0375	0.5001	1.5500e- 003	4.0779	9.0000e- 004	4.0788	0.4377	8.3000e- 004	0.4385		156.9468	156.9468	3.7400e- 003	4.0100e- 003	158.2365
Total	0.0576	0.0375	0.5001	1.5500e- 003	4.0779	9.0000e- 004	4.0788	0.4377	8.3000e- 004	0.4385		156.9468	156.9468	3.7400e- 003	4.0100e- 003	158.2365

### 3.4 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/e	day							lb/d	day		
Fugitive Dust					9.7774	0.0000	9.7774	3.7407	0.0000	3.7407			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.748 7	6,009.748 7	1.9437		6,058.340 5
Total	3.2181	32.3770	27.7228	0.0621	9.7774	1.3354	11.1128	3.7407	1.2286	4.9692		6,009.748 7	6,009.748 7	1.9437		6,058.340 5

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

### 3.4 Grading - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Hauling	1.1369	60.1070	16.0526	0.3064	176.5514	0.6796	177.2310	19.3351	0.6502	19.9853		32,744.81 54	32,744.81 54	0.4928	5.1609	34,295.08 48
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	0.0640	0.0417	0.5557	1.7300e- 003	4.5483	1.0000e- 003	4.5493	0.4906	9.2000e- 004	0.4915		174.3853	174.3853	4.1600e- 003	4.4600e- 003	175.8183
Total	1.2008	60.1486	16.6083	0.3081	181.0998	0.6806	181.7804	19.8257	0.6511	20.4768		32,919.20 07	32,919.20 07	0.4970	5.1654	34,470.90 31

### 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/o	day							lb/c	lay		
Fugitive Dust			1 1 1		3.8132	0.0000	3.8132	1.4589	0.0000	1.4589			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354	1 1 1	1.2286	1.2286	0.0000	6,009.748 7	6,009.748 7	1.9437		6,058.340 5
Total	3.2181	32.3770	27.7228	0.0621	3.8132	1.3354	5.1486	1.4589	1.2286	2.6874	0.0000	6,009.748 7	6,009.748 7	1.9437		6,058.340 5

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

### 3.4 Grading - 2024

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Hauling	1.1369	60.1070	16.0526	0.3064	175.8842	0.6796	176.5638	19.1713	0.6502	19.8216		32,744.81 54	32,744.81 54	0.4928	5.1609	34,295.08 48
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	0.0640	0.0417	0.5557	1.7300e- 003	4.5310	1.0000e- 003	4.5320	0.4863	9.2000e- 004	0.4872		174.3853	174.3853	4.1600e- 003	4.4600e- 003	175.8183
Total	1.2008	60.1486	16.6083	0.3081	180.4152	0.6806	181.0958	19.6577	0.6511	20.3088		32,919.20 07	32,919.20 07	0.4970	5.1654	34,470.90 31

### 3.5 Building Construction - 2024

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	1 1 1	0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

## 3.5 Building Construction - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.3182	10.7423	4.2624	0.0534	64.9156	0.0879	65.0036	6.8472	0.0841	6.9313		5,669.015 2	5,669.015 2	0.0595	0.8371	5,919.964 9
Worker	2.5368	1.6527	22.0333	0.0684	180.3418	0.0395	180.3814	19.4508	0.0364	19.4872		6,914.377 9	6,914.377 9	0.1648	0.1769	6,971.197 0
Total	2.8550	12.3951	26.2957	0.1219	245.2575	0.1275	245.3849	26.2980	0.1205	26.4185		12,583.39 31	12,583.39 31	0.2242	1.0140	12,891.16 19

#### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/d	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	1 1 1	0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

## 3.5 Building Construction - 2024

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.3182	10.7423	4.2624	0.0534	64.7909	0.0879	64.8788	6.8166	0.0841	6.9007		5,669.015 2	5,669.015 2	0.0595	0.8371	5,919.964 9
Worker	2.5368	1.6527	22.0333	0.0684	179.6552	0.0395	179.6948	19.2823	0.0364	19.3187		6,914.377 9	6,914.377 9	0.1648	0.1769	6,971.197 0
Total	2.8550	12.3951	26.2957	0.1219	244.4462	0.1275	244.5736	26.0989	0.1205	26.2194		12,583.39 31	12,583.39 31	0.2242	1.0140	12,891.16 19

### 3.6 Paving - 2025

### Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/d	day		
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	1.2838					0.0000	0.0000		0.0000	0.0000		       	0.0000			0.0000
Total	2.1990	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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

### 3.6 Paving - 2025

### 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/d	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	0.0450	0.0280	0.3881	1.2500e- 003	0.1677	7.1000e- 004	0.1684	0.0445	6.5000e- 004	0.0451		126.3625	126.3625	2.8200e- 003	3.1200e- 003	127.3630
Total	0.0450	0.0280	0.3881	1.2500e- 003	0.1677	7.1000e- 004	0.1684	0.0445	6.5000e- 004	0.0451		126.3625	126.3625	2.8200e- 003	3.1200e- 003	127.3630

### 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/e	day							lb/c	lay		
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	1.2838					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.1990	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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

### 3.6 Paving - 2025

### **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/e	day							lb/d	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	0.0450	0.0280	0.3881	1.2500e- 003	0.1546	7.1000e- 004	0.1553	0.0413	6.5000e- 004	0.0419		126.3625	126.3625	2.8200e- 003	3.1200e- 003	127.3630
Total	0.0450	0.0280	0.3881	1.2500e- 003	0.1546	7.1000e- 004	0.1553	0.0413	6.5000e- 004	0.0419		126.3625	126.3625	2.8200e- 003	3.1200e- 003	127.3630

### 3.7 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/e	day							lb/d	lay		
Archit. Coating	40.6959					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	40.8668	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

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

# 3.7 Architectural Coating - 2025

### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive 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/d	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	0.4766	0.2969	4.1137	0.0133	1.7773	7.5200e- 003	1.7848	0.4713	6.9200e- 003	0.4783		1,339.442 7	1,339.442 7	0.0299	0.0331	1,350.048 1
Total	0.4766	0.2969	4.1137	0.0133	1.7773	7.5200e- 003	1.7848	0.4713	6.9200e- 003	0.4783		1,339.442 7	1,339.442 7	0.0299	0.0331	1,350.048 1

#### 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/e	day							lb/c	lay		
Archit. Coating	40.6959		1			0.0000	0.0000	1 1 1	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	0.0000	281.4481	281.4481	0.0154		281.8319
Total	40.8668	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319

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

# 3.7 Architectural Coating - 2025

### 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/d	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	0.4766	0.2969	4.1137	0.0133	1.6382	7.5200e- 003	1.6457	0.4372	6.9200e- 003	0.4441		1,339.442 7	1,339.442 7	0.0299	0.0331	1,350.048 1
Total	0.4766	0.2969	4.1137	0.0133	1.6382	7.5200e- 003	1.6457	0.4372	6.9200e- 003	0.4441		1,339.442 7	1,339.442 7	0.0299	0.0331	1,350.048 1

# 4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

#### 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/e	day							lb/c	lay		
Mitigated	9.9537	25.6124	92.0198	0.2845	26.9675	0.3291	27.2966	7.2374	0.3113	7.5488		29,319.22 43	29,319.22 43	1.3193	2.2704	30,028.79 62
Unmitigated	9.9537	25.6124	92.0198	0.2845	26.9675	0.3291	27.2966	7.2374	0.3113	7.5488		29,319.22 43	29,319.22 43	1.3193	2.2704	30,028.79 62

# 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	4,373.00	4,373.00	4373.00	10,937,065	10,937,065
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	135.00	135.00	135.00	1,631,455	1,631,455
Total	4,508.00	4,508.00	4,508.00	12,568,521	12,568,521

## 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	е %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
General Office Building	16.60	8.40	6.90	0.00	100.00	0.00	77	19	4
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	33.20	0.00	0.00	100.00	100	0	0

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
General Office Building	0.577845	0.056458	0.173793	0.136090	0.025268	0.000000	0.000000	0.000000	0.000610	0.000304	0.023606	0.001094	0.004932
Other Asphalt Surfaces	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Parking Lot	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.170000	0.230000	0.600000	0.000000	0.000000	0.000000	0.000000	0.000000

# 5.0 Energy Detail

#### Historical Energy Use: N

# 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
NaturalGas Mitigated	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285
NaturalGas Unmitigated	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

### 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**

	NaturalGa s Use	ROG	NOx	со	SO2	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/o	day							lb/d	day		
City Park	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
General Office Building	93.9726	1.0100e- 003	9.2100e- 003	7.7400e- 003	6.0000e- 005		7.0000e- 004	7.0000e- 004		7.0000e- 004	7.0000e- 004		11.0556	11.0556	2.1000e- 004	2.0000e- 004	11.1213
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail	3799.93	0.0410	0.3725	0.3129	2.2400e- 003		0.0283	0.0283		0.0283	0.0283		447.0506	447.0506	8.5700e- 003	8.2000e- 003	449.7072
Total		0.0420	0.3818	0.3207	2.3000e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

### 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

	NaturalGa s Use	ROG	NOx	СО	SO2	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/e	day							lb/c	day		
City Park	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
General Office Building	0.0939726	1.0100e- 003	9.2100e- 003	7.7400e- 003	6.0000e- 005		7.0000e- 004	7.0000e- 004		7.0000e- 004	7.0000e- 004		11.0556	11.0556	2.1000e- 004	2.0000e- 004	11.1213
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail	3.79993	0.0410	0.3725	0.3129	2.2400e- 003		0.0283	0.0283		0.0283	0.0283		447.0506	447.0506	8.5700e- 003	8.2000e- 003	449.7072
Total		0.0420	0.3818	0.3207	2.3000e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

# 6.0 Area Detail

6.1 Mitigation Measures Area

### EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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/d	Jay		
Mitigated	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Unmitigated	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

# 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/e	day				
Architectural Coating	1.8478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.1998					0.0000	0.0000		0.0000	0.0000		 - - - -	0.0000			0.0000
Landscaping	0.0152	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004	1	5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Total	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

### 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/e	day				
Architectural Coating	1.8478	1 1 1				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.1998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0152	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Total	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

# 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

## **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

#### User Defined Equipment

Equipment Type

Number

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

## **CADO Warehouse Menifee With Construction Mitigation**

Riverside-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	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	690.04	1000sqft	15.84	690,037.00	0
Other Asphalt Surfaces	200.32	1000sqft	4.60	200,319.00	0
Parking Lot	717.24	1000sqft	16.47	717,240.00	0
City Park	6.28	Acre	6.28	273,885.00	0

#### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (Ib/MWhr)	390.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity ( (Ib/MWhr)	).004

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - landscape listed as city park, parking lot includes parking spaces and drive aisles, offsite improvements listed as other asphalt surface

Construction Phase - Applicant's Construction Schedule

Trips and VMT - nearest landfill - lambs canyon - 23 miles

On-road Fugitive Dust - access roads to site will remain unpaved (approx .1 mile) until paving phase

Demolition - structural demo area based on aerial photographs

Grading -

Architectural Coating - Rule 1113 VOC Building Envelope coatings =50

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

Vehicle Trips - trucks =135/690.037= 0.1956416829822169 passenger vehicles = 4,373/10 = 437.3, distribution trip length 33.2 SCAQMD Study Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403, mitigation - apply chemical stabilizer or pave roads prior to grading phase

Mobile Commute Mitigation - Mitigation requires TDM Program

Area Mitigation - Mitigation GHG-4

Energy Mitigation -

Water Mitigation -

Waste Mitigation - divert 75% of landfill waste MM GHG-3

Fleet Mix - Fleet Mix from Traffic Study Trip Gen

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	50.00	42.00
tblConstructionPhase	NumDays	30.00	33.00
tblConstructionPhase	NumDays	75.00	32.00
tblConstructionPhase	NumDays	740.00	132.00
tblConstructionPhase	NumDays	55.00	43.00
tblConstructionPhase	NumDays	55.00	86.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.60
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.0740e-003	0.00
tblFleetMix	LHD2	7.0740e-003	0.17

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

tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	МН	4.9320e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.23
tblFleetMix	OBUS	6.1000e-004	0.00
tblFleetMix	SBUS	1.0940e-003	0.00
tblFleetMix	UBUS	3.0400e-004	0.00
tblGrading	MaterialImported	0.00	145,000.00
tblLandUse	LandUseSquareFeet	690,040.00	690,037.00
tblLandUse	LandUseSquareFeet	200,320.00	200,319.00
tblLandUse	LandUseSquareFeet	273,556.80	273,885.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblTripsAndVMT	HaulingTripLength	20.00	23.00
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CNW_TL	6.90	33.20
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	41.00	100.00

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

tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.21	437.30
tblVehicleTrips	ST_TR	1.74	0.20
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.70	437.30
tblVehicleTrips	SU_TR	1.74	0.20
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.74	437.30
tblVehicleTrips	WD_TR	1.74	0.20

# 2.0 Emissions Summary

## 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/e	day							lb/d	day		
2024	4.5231	89.1399	47.4104	0.3699	245.2575	2.0151	245.9979	26.2980	1.8788	26.9952	0.0000	38,895.66 92	38,895.66 92	2.4455	5.1571	40,493.63 49
2025	43.6189	10.0406	21.9214	0.0418	1.9449	0.4783	2.4232	0.5158	0.4441	0.9599	0.0000	4,105.171 8	4,105.171 8	0.7617	0.0354	4,134.760 7
Maximum	43.6189	89.1399	47.4104	0.3699	245.2575	2.0151	245.9979	26.2980	1.8788	26.9952	0.0000	38,895.66 92	38,895.66 92	2.4455	5.1571	40,493.63 49

#### Mitigated Construction

	ROG	NOx	СО	SO2	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/o	day							lb/c	lay		
2024	3.3701	73.8388	48.7039	0.3699	47.4549	1.3399	47.6228	26.0989	1.2618	26.2599	0.0000	38,895.66 91	38,895.66 91	2.4455	5.1571	40,493.63 49
2025	42.8431	1.6576	24.6623	0.0418	1.7927	0.0496	1.8423	0.4785	0.0489	0.5274	0.0000	4,105.171 8	4,105.171 8	0.7617	0.0354	4,134.760 7
Maximum	42.8431	73.8388	48.7039	0.3699	47.4549	1.3399	47.6228	26.0989	1.2618	26.2599	0.0000	38,895.66 91	38,895.66 91	2.4455	5.1571	40,493.63 49

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	4.01	23.88	-5.82	0.00	80.08	44.27	80.09	0.88	43.58	4.18	0.00	0.00	0.00	0.00	0.00	0.00

#### 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	СО	SO2	Fugitive 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/e	day							lb/c	lay		
Area	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Energy	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285
Mobile	11.8966	24.2266	102.2790	0.3008	26.9675	0.3290	27.2965	7.2374	0.3112	7.5486		30,964.34 92	30,964.34 92	1.2781	2.2463	31,665.68 92
Total	28.0014	24.6099	102.7650	0.3031	26.9675	0.3586	27.3261	7.2374	0.3408	7.5782		31,422.81 07	31,422.81 07	1.2878	2.2547	32,126.89 61

### Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive 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/o	day							lb/c	lay		
Area	16.0541	8.3000e- 004	0.0959	1.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004		0.1915	0.1915	3.9000e- 004		0.2013
Energy	0.0337	0.3065	0.2575	1.8400e- 003		0.0233	0.0233		0.0233	0.0233		367.8194	367.8194	7.0500e- 003	6.7400e- 003	370.0052
Mobile	11.8433	24.1425	101.2133	0.2981	26.6601	0.3275	26.9876	7.1557	0.3098	7.4655		30,697.30 11	30,697.30 11	1.2683	2.2399	31,396.48 49
Total	27.9312	24.4499	101.5667	0.3000	26.6601	0.3510	27.0112	7.1557	0.3334	7.4891		31,065.31 20	31,065.31 20	1.2758	2.2466	31,766.69 14

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.25	0.65	1.17	1.02	1.14	2.10	1.15	1.13	2.18	1.18	0.00	1.14	1.14	0.93	0.36	1.12

# **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2024	3/31/2024	5	42	
2	Site Preparation	Site Preparation	4/1/2024	5/15/2024	5	33	
3	Grading	Grading	5/16/2024	6/30/2024	5	32	
4	Building Construction	Building Construction	7/1/2024	12/31/2024	5	132	
5	Paving	Paving	1/1/2025	2/28/2025	5	43	
6	Architectural Coating	Architectural Coating	1/1/2025	4/30/2025	5	86	

Acres of Grading (Site Preparation Phase): 49.5

Acres of Grading (Grading Phase): 96

Acres of Paving: 21.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,056; Non-Residential Outdoor: 350,019; Striped Parking Area: 55,054 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	36.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	18,125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	793.00	310.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	159.00	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

Use Soil Stabilizer

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

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**Clean Paved Roads** 

## 3.2 Demolition - 2024

**Unmitigated Construction On-Site** 

	ROG	NOx	СО	SO2	Fugitive 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/d	day		
Fugitive Dust			, , ,		0.1887	0.0000	0.1887	0.0286	0.0000	0.0286		, , ,	0.0000		, , ,	0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602	1 1 1 1	0.8922	0.8922		3,747.422 8	3,747.422 8	1.0485		3,773.634 5
Total	2.2437	20.8781	19.7073	0.0388	0.1887	0.9602	1.1488	0.0286	0.8922	0.9208		3,747.422 8	3,747.422 8	1.0485		3,773.634 5

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

## 3.2 Demolition - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	1.9800e- 003	0.0962	0.0250	5.3000e- 004	0.3073	1.1800e- 003	0.3084	0.0337	1.1300e- 003	0.0348		56.4825	56.4825	8.6000e- 004	8.9000e- 003	59.1568
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	0.0510	0.0301	0.5130	1.4300e- 003	3.4113	7.5000e- 004	3.4120	0.3679	6.9000e- 004	0.3686		144.3160	144.3160	3.1200e- 003	3.2700e- 003	145.3683
Total	0.0530	0.1263	0.5380	1.9600e- 003	3.7185	1.9300e- 003	3.7204	0.4016	1.8200e- 003	0.4034		200.7986	200.7986	3.9800e- 003	0.0122	204.5252

#### 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/o	day							lb/c	lay		
Fugitive Dust		, , ,			0.0736	0.0000	0.0736	0.0111	0.0000	0.0111			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,747.422 8	3,747.422 8	1.0485		3,773.634 5
Total	0.4623	2.0032	23.2798	0.0388	0.0736	0.0616	0.1352	0.0111	0.0616	0.0728	0.0000	3,747.422 8	3,747.422 8	1.0485		3,773.634 5

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

## 3.2 Demolition - 2024

#### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	1.9800e- 003	0.0962	0.0250	5.3000e- 004	0.0624	1.1800e- 003	0.0636	0.0334	1.1300e- 003	0.0345		56.4825	56.4825	8.6000e- 004	8.9000e- 003	59.1568
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	0.0510	0.0301	0.5130	1.4300e- 003	0.6724	7.5000e- 004	0.6732	0.3647	6.9000e- 004	0.3654		144.3160	144.3160	3.1200e- 003	3.2700e- 003	145.3683
Total	0.0530	0.1263	0.5380	1.9600e- 003	0.7348	1.9300e- 003	0.7367	0.3981	1.8200e- 003	0.3999		200.7986	200.7986	3.9800e- 003	0.0122	204.5252

## 3.3 Site Preparation - 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/e	day							lb/c	lay		
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	19.6570	1.2294	20.8864	10.1025	1.1310	11.2335		3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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

# 3.3 Site Preparation - 2024

## Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	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	0.0613	0.0362	0.6156	1.7100e- 003	4.0935	9.0000e- 004	4.0944	0.4415	8.3000e- 004	0.4423		173.1792	173.1792	3.7500e- 003	3.9200e- 003	174.4420
Total	0.0613	0.0362	0.6156	1.7100e- 003	4.0935	9.0000e- 004	4.0944	0.4415	8.3000e- 004	0.4423		173.1792	173.1792	3.7500e- 003	3.9200e- 003	174.4420

#### 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/e	day							lb/c	lay		
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	0.4656	2.0175	20.8690	0.0381	7.6662	0.0621	7.7283	3.9400	0.0621	4.0020	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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

# 3.3 Site Preparation - 2024

#### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	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	0.0613	0.0362	0.6156	1.7100e- 003	0.8069	9.0000e- 004	0.8078	0.4377	8.3000e- 004	0.4385		173.1792	173.1792	3.7500e- 003	3.9200e- 003	174.4420
Total	0.0613	0.0362	0.6156	1.7100e- 003	0.8069	9.0000e- 004	0.8078	0.4377	8.3000e- 004	0.4385		173.1792	173.1792	3.7500e- 003	3.9200e- 003	174.4420

## 3.4 Grading - 2024

# **Unmitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/d	day		
Fugitive Dust			1 1 1		9.7774	0.0000	9.7774	3.7407	0.0000	3.7407			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.748 7	6,009.748 7	1.9437		6,058.340 5
Total	3.2181	32.3770	27.7228	0.0621	9.7774	1.3354	11.1128	3.7407	1.2286	4.9692		6,009.748 7	6,009.748 7	1.9437		6,058.340 5

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

# 3.4 Grading - 2024

## Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Hauling	1.2369	56.7228	15.7265	0.3059	176.5514	0.6787	177.2301	19.3351	0.6493	19.9845		32,693.49 91	32,693.49 91	0.4977	5.1528	34,241.47 00
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	0.0681	0.0402	0.6840	1.9000e- 003	4.5483	1.0000e- 003	4.5493	0.4906	9.2000e- 004	0.4915		192.4214	192.4214	4.1600e- 003	4.3600e- 003	193.8244
Total	1.3049	56.7630	16.4106	0.3078	181.0998	0.6797	181.7794	19.8257	0.6503	20.4759		32,885.92 05	32,885.92 05	0.5018	5.1571	34,435.29 44

#### 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/e	day							lb/c	lay		
Fugitive Dust			1 1 1		3.8132	0.0000	3.8132	1.4589	0.0000	1.4589		1 1 1	0.0000			0.0000
Off-Road	1.9089	17.0758	31.2627	0.0621		0.6602	0.6602		0.6115	0.6115	0.0000	6,009.748 7	6,009.748 7	1.9437		6,058.340 5
Total	1.9089	17.0758	31.2627	0.0621	3.8132	0.6602	4.4734	1.4589	0.6115	2.0704	0.0000	6,009.748 7	6,009.748 7	1.9437		6,058.340 5

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

# 3.4 Grading - 2024

## **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Hauling	1.2369	56.7228	15.7265	0.3059	35.8448	0.6787	36.5235	19.1713	0.6493	19.8207		32,693.49 91	32,693.49 91	0.4977	5.1528	34,241.47 00
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	0.0681	0.0402	0.6840	1.9000e- 003	0.8966	1.0000e- 003	0.8976	0.4863	9.2000e- 004	0.4872		192.4214	192.4214	4.1600e- 003	4.3600e- 003	193.8244
Total	1.3049	56.7630	16.4106	0.3078	36.7414	0.6797	37.4210	19.6577	0.6503	20.3079		32,885.92 05	32,885.92 05	0.5018	5.1571	34,435.29 44

## 3.5 Building Construction - 2024

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

# 3.5 Building Construction - 2024

## Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/d	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	0.3439	10.1287	4.1224	0.0533	64.9156	0.0876	65.0033	6.8472	0.0838	6.9310		5,654.883 0	5,654.883 0	0.0606	0.8344	5,905.038 9
Worker	2.6983	1.5936	27.1212	0.0755	180.3418	0.0395	180.3814	19.4508	0.0364	19.4872		7,629.506 9	7,629.506 9	0.1650	0.1728	7,685.138 2
Total	3.0423	11.7223	31.2436	0.1288	245.2575	0.1272	245.3846	26.2980	0.1202	26.4183		13,284.38 98	13,284.38 98	0.2256	1.0072	13,590.17 72

#### 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/o	day							lb/d	day		
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408	1 1 1	0.0408	0.0408	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

# 3.5 Building Construction - 2024

#### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.3439	10.1287	4.1224	0.0533	11.9059	0.0876	11.9935	6.8166	0.0838	6.9004		5,654.883 0	5,654.883 0	0.0606	0.8344	5,905.038 9
Worker	2.6983	1.5936	27.1212	0.0755	35.5490	0.0395	35.5886	19.2823	0.0364	19.3187		7,629.506 9	7,629.506 9	0.1650	0.1728	7,685.138 2
Total	3.0423	11.7223	31.2436	0.1288	47.4549	0.1272	47.5820	26.0989	0.1202	26.2191		13,284.38 98	13,284.38 98	0.2256	1.0072	13,590.17 72

#### 3.6 Paving - 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/e	day							lb/d	lay		
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	1.2838					0.0000	0.0000		0.0000	0.0000		       	0.0000			0.0000
Total	2.1990	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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

# 3.6 Paving - 2025

### 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/d	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	0.0477	0.0270	0.4771	1.3800e- 003	0.1677	7.1000e- 004	0.1684	0.0445	6.5000e- 004	0.0451		139.3947	139.3947	2.8100e- 003	3.0500e- 003	140.3742
Total	0.0477	0.0270	0.4771	1.3800e- 003	0.1677	7.1000e- 004	0.1684	0.0445	6.5000e- 004	0.0451		139.3947	139.3947	2.8100e- 003	3.0500e- 003	140.3742

## 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/e	day							lb/c	lay		
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	1.2838					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5643	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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

# 3.6 Paving - 2025

## **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/e	day							lb/d	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	0.0477	0.0270	0.4771	1.3800e- 003	0.1546	7.1000e- 004	0.1553	0.0413	6.5000e- 004	0.0419		139.3947	139.3947	2.8100e- 003	3.0500e- 003	140.3742
Total	0.0477	0.0270	0.4771	1.3800e- 003	0.1546	7.1000e- 004	0.1553	0.0413	6.5000e- 004	0.0419		139.3947	139.3947	2.8100e- 003	3.0500e- 003	140.3742

## 3.7 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/e	day							lb/d	day		
Archit. Coating	40.6959	1 1 1				0.0000	0.0000	1 1 1	0.0000	0.0000		1 1 1	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	40.8668	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

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

# 3.7 Architectural Coating - 2025

## 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/e	day							lb/c	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	0.5055	0.2864	5.0572	0.0146	1.7773	7.5200e- 003	1.7848	0.4713	6.9200e- 003	0.4783		1,477.583 9	1,477.583 9	0.0298	0.0323	1,487.966 8
Total	0.5055	0.2864	5.0572	0.0146	1.7773	7.5200e- 003	1.7848	0.4713	6.9200e- 003	0.4783		1,477.583 9	1,477.583 9	0.0298	0.0323	1,487.966 8

#### 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/e	day							lb/c	lay		
Archit. Coating	40.6959					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	40.7256	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

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

# 3.7 Architectural Coating - 2025

### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/d	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	0.5055	0.2864	5.0572	0.0146	1.6382	7.5200e- 003	1.6457	0.4372	6.9200e- 003	0.4441		1,477.583 9	1,477.583 9	0.0298	0.0323	1,487.966 8
Total	0.5055	0.2864	5.0572	0.0146	1.6382	7.5200e- 003	1.6457	0.4372	6.9200e- 003	0.4441		1,477.583 9	1,477.583 9	0.0298	0.0323	1,487.966 8

# 4.0 Operational Detail - Mobile

# 4.1 Mitigation Measures Mobile

Implement Trip Reduction Program

Employee Vanpool/Shuttle

Provide Riade Sharing Program

#### 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/e	day							lb/c	lay		
Mitigated	11.8433	24.1425	101.2133	0.2981	26.6601	0.3275	26.9876	7.1557	0.3098	7.4655		30,697.30 11	30,697.30 11	1.2683	2.2399	31,396.48 49
Unmitigated	11.8966	24.2266	102.2790	0.3008	26.9675	0.3290	27.2965	7.2374	0.3112	7.5486		30,964.34 92	30,964.34 92	1.2781	2.2463	31,665.68 92

# 4.2 Trip Summary Information

	Avei	age Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	4,373.00	4,373.00	4373.00	10,937,065	10,790,509
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	135.00	135.00	135.00	1,631,455	1,631,455
Total	4,508.00	4,508.00	4,508.00	12,568,521	12,421,964

# 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
General Office Building	16.60	8.40	6.90	0.00	100.00	0.00	77	19	4
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	33.20	0.00	0.00	100.00	100	0	0

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
General Office Building	0.577845	0.056458	0.173793	0.136090	0.025268	0.000000	0.000000	0.000000	0.000610	0.000304	0.023606	0.001094	0.004932
Other Asphalt Surfaces	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Parking Lot	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.170000	0.230000	0.600000	0.000000	0.000000	0.000000	0.000000	0.000000

# 5.0 Energy Detail

#### istorical Energy Use: N

# 5.1 Mitigation Measures Energy

	ROG	NOx	СО	SO2	Fugitive 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/d	day							lb/c	lay		
NaturalGas Mitigated																
NaturalGas Unmitigated	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

## 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**

	NaturalGa s Use	ROG	NOx	СО	SO2	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/d	day		
City Park	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
General Office Building	93.9726	1.0100e- 003	9.2100e- 003	7.7400e- 003	6.0000e- 005		7.0000e- 004	7.0000e- 004		7.0000e- 004	7.0000e- 004		11.0556	11.0556	2.1000e- 004	2.0000e- 004	11.1213
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail	3799.93	0.0410	0.3725	0.3129	2.2400e- 003		0.0283	0.0283		0.0283	0.0283		447.0506	447.0506	8.5700e- 003	8.2000e- 003	449.7072
Total		0.0420	0.3818	0.3207	2.3000e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

## 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

<u>**/litigated**</u>

	NaturalGa s Use	ROG	NOx	СО	SO2	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/e	day		
City Park	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
General Office Building																	0
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail			r						r								
Total																	

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

#### 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/d	Jay		
Mitigated	16.0541	8.3000e- 004	0.0959	1.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004		0.1915	0.1915	3.9000e- 004		0.2013
Unmitigated	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

# 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/d	day							lb/e	day		
Architectural Coating	1.8478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.1998					0.0000	0.0000		0.0000	0.0000		 - - -	0.0000			0.0000
Landscaping	0.0152	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004	1	5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Total	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

## 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/d	day		
Architectural Coating	1.8478	1 1 1				0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Consumer Products	14.1998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.4600e- 003	8.3000e- 004	0.0959	1.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004		0.1915	0.1915	3.9000e- 004		0.2013
Total	16.0541	8.3000e- 004	0.0959	1.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004		0.1915	0.1915	3.9000e- 004		0.2013

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

## 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

# 9.0 Operational Offroad

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

# **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 Nu	umber Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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### **User Defined Equipment**

Equipment Type Number

# **11.0 Vegetation**

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

## **CADO Warehouse Menifee With Construction Mitigation**

Riverside-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	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	690.04	1000sqft	15.84	690,037.00	0
Other Asphalt Surfaces	200.32	1000sqft	4.60	200,319.00	0
Parking Lot	717.24	1000sqft	16.47	717,240.00	0
City Park	6.28	Acre	6.28	273,885.00	0

#### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (Ib/MWhr)	390.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity ( (Ib/MWhr)	).004

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - landscape listed as city park, parking lot includes parking spaces and drive aisles, offsite improvements listed as other asphalt surface

Construction Phase - Applicant's Construction Schedule

Trips and VMT - nearest landfill - lambs canyon - 23 miles

On-road Fugitive Dust - access roads to site will remain unpaved (approx .1 mile) until paving phase

Demolition - structural demo area based on aerial photographs

Grading -

Architectural Coating - Rule 1113 VOC Building Envelope coatings =50

Page 2 of 30

CADO Warehouse Menifee With Construction Mitigation - Riverside-South Coast County, Winter

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

Vehicle Trips - trucks =135/690.037= 0.1956416829822169 passenger vehicles = 4,373/10 = 437.3, distribution trip length 33.2 SCAQMD Study Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403, mitigation - apply chemical stabilizer or pave roads prior to grading phase

Mobile Commute Mitigation - Mitigation requires TDM Program

Area Mitigation - Mitigation GHG-4

Energy Mitigation -

Water Mitigation -

Waste Mitigation - divert 75% of landfill waste MM GHG-3

Fleet Mix - Fleet Mix from Traffic Study Trip Gen

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00

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

th Const Courie Mitigation	Number Of Equipment Mitigated	0.00	1.00
toiConstEquipiviitigation		0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	50.00	42.00
tblConstructionPhase	NumDays	30.00	33.00
tblConstructionPhase	NumDays	75.00	32.00
tblConstructionPhase	NumDays	740.00	132.00
tblConstructionPhase	NumDays	55.00	43.00
tblConstructionPhase	NumDays	55.00	86.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.60
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.0740e-003	0.00
tblFleetMix	LHD2	7.0740e-003	0.17

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

tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	МН	4.9320e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.23
tblFleetMix	OBUS	6.1000e-004	0.00
tblFleetMix	SBUS	1.0940e-003	0.00
tblFleetMix	UBUS	3.0400e-004	0.00
tblGrading	MaterialImported	0.00	145,000.00
tblLandUse	LandUseSquareFeet	690,040.00	690,037.00
tblLandUse	LandUseSquareFeet	200,320.00	200,319.00
tblLandUse	LandUseSquareFeet	273,556.80	273,885.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblTripsAndVMT	HaulingTripLength	20.00	23.00
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CNW_TL	6.90	33.20
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	41.00	100.00

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

tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.21	437.30
tblVehicleTrips	ST_TR	1.74	0.20
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.70	437.30
tblVehicleTrips	SU_TR	1.74	0.20
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.74	437.30
tblVehicleTrips	WD_TR	1.74	0.20

# 2.0 Emissions Summary

### 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/d	day							lb/c	lay		
2024	4.4190	92.5256	44.3311	0.3702	245.2575	2.0160	245.9982	26.2980	1.8797	26.9954	0.0000	38,928.94 94	38,928.94 94	2.4407	5.1654	40,529.24 37
2025	43.5873	10.0521	20.8889	0.0403	1.9449	0.4783	2.4232	0.5158	0.4441	0.9599	0.0000	3,953.998 4	3,953.998 4	0.7617	0.0362	3,983.830 8
Maximum	43.5873	92.5256	44.3311	0.3702	245.2575	2.0160	245.9982	26.2980	1.8797	26.9954	0.0000	38,928.94 94	38,928.94 94	2.4407	5.1654	40,529.24 37

#### Mitigated Construction

	ROG	NOx	СО	SO2	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					
2024	3.1828	77.2245	47.8710	0.3702	47.4549	1.3408	47.6231	26.0989	1.2627	26.2602	0.0000	38,928.94 94	38,928.94 94	2.4407	5.1654	40,529.24 37
2025	42.8114	1.6691	23.6299	0.0403	1.7927	0.0496	1.8423	0.4785	0.0489	0.5274	0.0000	3,953.998 4	3,953.998 4	0.7617	0.0362	3,983.830 8
Maximum	42.8114	77.2245	47.8710	0.3702	47.4549	1.3408	47.6231	26.0989	1.2627	26.2602	0.0000	38,928.94 94	38,928.94 94	2.4407	5.1654	40,529.24 37
### EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	4.19	23.09	-9.63	0.00	80.08	44.26	80.09	0.88	43.56	4.18	0.00	0.00	0.00	0.00	0.00	0.00

### 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	СО	SO2	Fugitive 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/d	day							lb/c	lay		
Area	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Energy	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285
Mobile	9.9537	25.6124	92.0198	0.2845	26.9675	0.3291	27.2966	7.2374	0.3113	7.5488		29,319.22 43	29,319.22 43	1.3193	2.2704	30,028.79 62
Total	26.0585	25.9957	92.5059	0.2868	26.9675	0.3587	27.3262	7.2374	0.3409	7.5784		29,777.68 59	29,777.68 59	1.3290	2.2788	30,490.00 31

#### Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/c	lay		
Area	16.0541	8.3000e- 004	0.0959	1.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004		0.1915	0.1915	3.9000e- 004		0.2013
Energy	0.0337	0.3065	0.2575	1.8400e- 003		0.0233	0.0233		0.0233	0.0233		367.8194	367.8194	7.0500e- 003	6.7400e- 003	370.0052
Mobile	9.9014	25.5226	91.1291	0.2821	26.6601	0.3276	26.9878	7.1557	0.3100	7.4657		29,074.38 82	29,074.38 82	1.3099	2.2638	29,781.75 01
Total	25.9892	25.8300	91.4825	0.2839	26.6601	0.3512	27.0113	7.1557	0.3335	7.4892		29,442.39 91	29,442.39 91	1.3173	2.2706	30,151.95 67

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.27	0.64	1.11	1.00	1.14	2.10	1.15	1.13	2.18	1.18	0.00	1.13	1.13	0.88	0.36	1.11

# 3.0 Construction Detail

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2024	3/31/2024	5	42	
2	Site Preparation	Site Preparation	4/1/2024	5/15/2024	5	33	
3	Grading	Grading	5/16/2024	6/30/2024	5	32	
4	Building Construction	Building Construction	7/1/2024	12/31/2024	5	132	
5	Paving	Paving	1/1/2025	2/28/2025	5	43	
6	Architectural Coating	Architectural Coating	1/1/2025	4/30/2025	5	86	

Acres of Grading (Site Preparation Phase): 49.5

Acres of Grading (Grading Phase): 96

Acres of Paving: 21.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,056; Non-Residential Outdoor: 350,019; Striped Parking Area: 55,054 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	36.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	18,125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	793.00	310.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	159.00	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

Use Soil Stabilizer

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

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**Clean Paved Roads** 

### 3.2 Demolition - 2024

	ROG	NOx	СО	SO2	Fugitive 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/o	lay		
Fugitive Dust		1 1 1	, , ,		0.1887	0.0000	0.1887	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602	, , , ,	0.8922	0.8922		3,747.422 8	3,747.422 8	1.0485		3,773.634 5
Total	2.2437	20.8781	19.7073	0.0388	0.1887	0.9602	1.1488	0.0286	0.8922	0.9208		3,747.422 8	3,747.422 8	1.0485		3,773.634 5

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

### 3.2 Demolition - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	1.8300e- 003	0.1018	0.0255	5.3000e- 004	0.3073	1.1800e- 003	0.3084	0.0337	1.1300e- 003	0.0348		56.5602	56.5602	8.5000e- 004	8.9100e- 003	59.2380
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	0.0313	0.4168	1.2900e- 003	3.4113	7.5000e- 004	3.4120	0.3679	6.9000e- 004	0.3686		130.7890	130.7890	3.1200e- 003	3.3500e- 003	131.8638
Total	0.0498	0.1331	0.4423	1.8200e- 003	3.7185	1.9300e- 003	3.7204	0.4016	1.8200e- 003	0.4034		187.3492	187.3492	3.9700e- 003	0.0123	191.1017

	ROG	NOx	CO	SO2	Fugitive 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/o	day							lb/c	lay		
Fugitive Dust		, , ,			0.0736	0.0000	0.0736	0.0111	0.0000	0.0111			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,747.422 8	3,747.422 8	1.0485		3,773.634 5
Total	0.4623	2.0032	23.2798	0.0388	0.0736	0.0616	0.1352	0.0111	0.0616	0.0728	0.0000	3,747.422 8	3,747.422 8	1.0485		3,773.634 5

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

### 3.2 Demolition - 2024

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/d	day		
Hauling	1.8300e- 003	0.1018	0.0255	5.3000e- 004	0.0624	1.1800e- 003	0.0636	0.0334	1.1300e- 003	0.0345		56.5602	56.5602	8.5000e- 004	8.9100e- 003	59.2380
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	0.0313	0.4168	1.2900e- 003	0.6724	7.5000e- 004	0.6732	0.3647	6.9000e- 004	0.3654		130.7890	130.7890	3.1200e- 003	3.3500e- 003	131.8638
Total	0.0498	0.1331	0.4423	1.8200e- 003	0.7348	1.9300e- 003	0.7367	0.3981	1.8200e- 003	0.3999		187.3492	187.3492	3.9700e- 003	0.0123	191.1017

### 3.3 Site Preparation - 2024

	ROG	NOx	CO	SO2	Fugitive 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/e	day							lb/d	day		
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294	1 1 1	1.1310	1.1310		3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	19.6570	1.2294	20.8864	10.1025	1.1310	11.2335		3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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

## 3.3 Site Preparation - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	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	0.0576	0.0375	0.5001	1.5500e- 003	4.0935	9.0000e- 004	4.0944	0.4415	8.3000e- 004	0.4423		156.9468	156.9468	3.7400e- 003	4.0100e- 003	158.2365
Total	0.0576	0.0375	0.5001	1.5500e- 003	4.0935	9.0000e- 004	4.0944	0.4415	8.3000e- 004	0.4423		156.9468	156.9468	3.7400e- 003	4.0100e- 003	158.2365

	ROG	NOx	CO	SO2	Fugitive 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/e	day							lb/c	lay		
Fugitive Dust		1 1 1			7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	0.4656	2.0175	20.8690	0.0381	7.6662	0.0621	7.7283	3.9400	0.0621	4.0020	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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

## 3.3 Site Preparation - 2024

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	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	0.0576	0.0375	0.5001	1.5500e- 003	0.8069	9.0000e- 004	0.8078	0.4377	8.3000e- 004	0.4385		156.9468	156.9468	3.7400e- 003	4.0100e- 003	158.2365
Total	0.0576	0.0375	0.5001	1.5500e- 003	0.8069	9.0000e- 004	0.8078	0.4377	8.3000e- 004	0.4385		156.9468	156.9468	3.7400e- 003	4.0100e- 003	158.2365

### 3.4 Grading - 2024

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/d	lay		
Fugitive Dust					9.7774	0.0000	9.7774	3.7407	0.0000	3.7407			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.748 7	6,009.748 7	1.9437		6,058.340 5
Total	3.2181	32.3770	27.7228	0.0621	9.7774	1.3354	11.1128	3.7407	1.2286	4.9692		6,009.748 7	6,009.748 7	1.9437		6,058.340 5

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

## 3.4 Grading - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Hauling	1.1369	60.1070	16.0526	0.3064	176.5514	0.6796	177.2310	19.3351	0.6502	19.9853		32,744.81 54	32,744.81 54	0.4928	5.1609	34,295.08 48
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	0.0640	0.0417	0.5557	1.7300e- 003	4.5483	1.0000e- 003	4.5493	0.4906	9.2000e- 004	0.4915		174.3853	174.3853	4.1600e- 003	4.4600e- 003	175.8183
Total	1.2008	60.1486	16.6083	0.3081	181.0998	0.6806	181.7804	19.8257	0.6511	20.4768		32,919.20 07	32,919.20 07	0.4970	5.1654	34,470.90 31

	ROG	NOx	CO	SO2	Fugitive 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/o	day							lb/c	lay		
Fugitive Dust		1 1 1	1 1 1		3.8132	0.0000	3.8132	1.4589	0.0000	1.4589		1 1 1	0.0000			0.0000
Off-Road	1.9089	17.0758	31.2627	0.0621		0.6602	0.6602		0.6115	0.6115	0.0000	6,009.748 7	6,009.748 7	1.9437		6,058.340 5
Total	1.9089	17.0758	31.2627	0.0621	3.8132	0.6602	4.4734	1.4589	0.6115	2.0704	0.0000	6,009.748 7	6,009.748 7	1.9437		6,058.340 5

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

## 3.4 Grading - 2024

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Hauling	1.1369	60.1070	16.0526	0.3064	35.8448	0.6796	36.5244	19.1713	0.6502	19.8216		32,744.81 54	32,744.81 54	0.4928	5.1609	34,295.08 48
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	0.0640	0.0417	0.5557	1.7300e- 003	0.8966	1.0000e- 003	0.8976	0.4863	9.2000e- 004	0.4872		174.3853	174.3853	4.1600e- 003	4.4600e- 003	175.8183
Total	1.2008	60.1486	16.6083	0.3081	36.7414	0.6806	37.4220	19.6577	0.6511	20.3088		32,919.20 07	32,919.20 07	0.4970	5.1654	34,470.90 31

### 3.5 Building Construction - 2024

	ROG	NOx	CO	SO2	Fugitive 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/e	day							lb/d	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

## 3.5 Building Construction - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.3182	10.7423	4.2624	0.0534	64.9156	0.0879	65.0036	6.8472	0.0841	6.9313		5,669.015 2	5,669.015 2	0.0595	0.8371	5,919.964 9
Worker	2.5368	1.6527	22.0333	0.0684	180.3418	0.0395	180.3814	19.4508	0.0364	19.4872		6,914.377 9	6,914.377 9	0.1648	0.1769	6,971.197 0
Total	2.8550	12.3951	26.2957	0.1219	245.2575	0.1275	245.3849	26.2980	0.1205	26.4185		12,583.39 31	12,583.39 31	0.2242	1.0140	12,891.16 19

	ROG	NOx	CO	SO2	Fugitive 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/o	day							lb/d	day		
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408	1 1 1	0.0408	0.0408	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

## 3.5 Building Construction - 2024

### **Mitigated Construction Off-Site**

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/o	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	0.3182	10.7423	4.2624	0.0534	11.9059	0.0879	11.9938	6.8166	0.0841	6.9007		5,669.015 2	5,669.015 2	0.0595	0.8371	5,919.964 9
Worker	2.5368	1.6527	22.0333	0.0684	35.5490	0.0395	35.5886	19.2823	0.0364	19.3187		6,914.377 9	6,914.377 9	0.1648	0.1769	6,971.197 0
Total	2.8550	12.3951	26.2957	0.1219	47.4549	0.1275	47.5823	26.0989	0.1205	26.2194		12,583.39 31	12,583.39 31	0.2242	1.0140	12,891.16 19

### 3.6 Paving - 2025

	ROG	NOx	СО	SO2	Fugitive 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/e	day							lb/d	day		
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	1.2838					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.1990	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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

## 3.6 Paving - 2025

### 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/d	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	0.0450	0.0280	0.3881	1.2500e- 003	0.1677	7.1000e- 004	0.1684	0.0445	6.5000e- 004	0.0451		126.3625	126.3625	2.8200e- 003	3.1200e- 003	127.3630
Total	0.0450	0.0280	0.3881	1.2500e- 003	0.1677	7.1000e- 004	0.1684	0.0445	6.5000e- 004	0.0451		126.3625	126.3625	2.8200e- 003	3.1200e- 003	127.3630

	ROG	NOx	CO	SO2	Fugitive 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/e	day							lb/c	lay		
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	1.2838					0.0000	0.0000	1 1 1 1 1	0.0000	0.0000		       	0.0000			0.0000
Total	1.5643	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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

## 3.6 Paving - 2025

### **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/e	day							lb/d	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	0.0450	0.0280	0.3881	1.2500e- 003	0.1546	7.1000e- 004	0.1553	0.0413	6.5000e- 004	0.0419		126.3625	126.3625	2.8200e- 003	3.1200e- 003	127.3630
Total	0.0450	0.0280	0.3881	1.2500e- 003	0.1546	7.1000e- 004	0.1553	0.0413	6.5000e- 004	0.0419		126.3625	126.3625	2.8200e- 003	3.1200e- 003	127.3630

### 3.7 Architectural Coating - 2025

	ROG	NOx	CO	SO2	Fugitive 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/e	day							lb/d	day		
Archit. Coating	40.6959	1 1 1				0.0000	0.0000	1 1 1	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	40.8668	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

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

# 3.7 Architectural Coating - 2025

### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive 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/d	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	0.4766	0.2969	4.1137	0.0133	1.7773	7.5200e- 003	1.7848	0.4713	6.9200e- 003	0.4783		1,339.442 7	1,339.442 7	0.0299	0.0331	1,350.048 1
Total	0.4766	0.2969	4.1137	0.0133	1.7773	7.5200e- 003	1.7848	0.4713	6.9200e- 003	0.4783		1,339.442 7	1,339.442 7	0.0299	0.0331	1,350.048 1

	ROG	NOx	CO	SO2	Fugitive 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/e	day							lb/c	lay		
Archit. Coating	40.6959					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	40.7256	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

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

# 3.7 Architectural Coating - 2025

### 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/d	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	0.4766	0.2969	4.1137	0.0133	1.6382	7.5200e- 003	1.6457	0.4372	6.9200e- 003	0.4441		1,339.442 7	1,339.442 7	0.0299	0.0331	1,350.048 1
Total	0.4766	0.2969	4.1137	0.0133	1.6382	7.5200e- 003	1.6457	0.4372	6.9200e- 003	0.4441		1,339.442 7	1,339.442 7	0.0299	0.0331	1,350.048 1

# 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

Implement Trip Reduction Program

Employee Vanpool/Shuttle

Provide Riade Sharing Program

### 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/e	day							lb/c	lay		
Mitigated	9.9014	25.5226	91.1291	0.2821	26.6601	0.3276	26.9878	7.1557	0.3100	7.4657		29,074.38 82	29,074.38 82	1.3099	2.2638	29,781.75 01
Unmitigated	9.9537	25.6124	92.0198	0.2845	26.9675	0.3291	27.2966	7.2374	0.3113	7.5488		29,319.22 43	29,319.22 43	1.3193	2.2704	30,028.79 62

# 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Office Building	4,373.00	4,373.00	4373.00	10,937,065	10,790,509
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	135.00	135.00	135.00	1,631,455	1,631,455
Total	4,508.00	4,508.00	4,508.00	12,568,521	12,421,964

## 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
General Office Building	16.60	8.40	6.90	0.00	100.00	0.00	77	19	4
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	33.20	0.00	0.00	100.00	100	0	0

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
General Office Building	0.577845	0.056458	0.173793	0.136090	0.025268	0.000000	0.000000	0.000000	0.000610	0.000304	0.023606	0.001094	0.004932
Other Asphalt Surfaces	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Parking Lot	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.170000	0.230000	0.600000	0.000000	0.000000	0.000000	0.000000	0.000000

# 5.0 Energy Detail

#### istorical Energy Use: N

# 5.1 Mitigation Measures Energy

	ROG	NOx	СО	SO2	Fugitive 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/d	day							lb/c	lay		
NaturalGas Mitigated																2
NaturalGas Unmitigated	0.0420	0.3818	0.3207	2.2900e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

### 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**

	NaturalGa s Use	ROG	NOx	СО	SO2	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/e	day							lb/c	day		
City Park	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
General Office Building	93.9726	1.0100e- 003	9.2100e- 003	7.7400e- 003	6.0000e- 005		7.0000e- 004	7.0000e- 004		7.0000e- 004	7.0000e- 004		11.0556	11.0556	2.1000e- 004	2.0000e- 004	11.1213
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail	3799.93	0.0410	0.3725	0.3129	2.2400e- 003		0.0283	0.0283		0.0283	0.0283		447.0506	447.0506	8.5700e- 003	8.2000e- 003	449.7072
Total		0.0420	0.3818	0.3207	2.3000e- 003		0.0290	0.0290		0.0290	0.0290		458.1062	458.1062	8.7800e- 003	8.4000e- 003	460.8285

### 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

<u>/litigated</u>

	NaturalGa s Use	ROG	NOx	СО	SO2	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/e	day							lb/d	day		
City Park	0	0.0000	0.0000	0.0000	0.0000	1 1 1	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building																	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail			r						r								
Total																	

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

### 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/d	day		
Mitigated	16.0541	8.3000e- 004	0.0959	1.0000e- 005		2.5000e- 004	2.5000e- 004	, , ,	2.5000e- 004	2.5000e- 004		0.1915	0.1915	3.9000e- 004		0.2013
Unmitigated	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004	<b></b> ! ! !	5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

# 6.2 Area by SubCategory

**Unmitigated** 

	ROG	NOx	со	SO2	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/c	day							lb/o	day		
Architectural Coating	1.8478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.1998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0152	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004	1	5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785
Total	16.0629	1.5000e- 003	0.1654	1.0000e- 005		5.9000e- 004	5.9000e- 004		5.9000e- 004	5.9000e- 004		0.3554	0.3554	9.2000e- 004		0.3785

### 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/e	day							lb/e	day		
Architectural Coating	1.8478					0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Consumer Products	14.1998					0.0000	0.0000		0.0000	0.0000		       	0.0000			0.0000
Landscaping	6.4600e- 003	8.3000e- 004	0.0959	1.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004		0.1915	0.1915	3.9000e- 004		0.2013
Total	16.0541	8.3000e- 004	0.0959	1.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004		0.1915	0.1915	3.9000e- 004		0.2013

# 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

# 9.0 Operational Offroad

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

## **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

## **11.0 Vegetation**

#### **Electricity Consumption and Solar PV Production Estimates**

49 kW(dc) PV system to service 20% of the buildings anticipated electral demand 81,830 kWh

409,150 kWh/year total building electricty demand

Electricity consumption provided by the project developer and construction contractor (via email 2/14/24).

#### **Project Electricity Consumption**

	KSF	kWh/yr	MWh/yr	CO₂e/yr
Building	700.04	409,150	409.15	65.07
Parking	917.50	803.73	0.80	0.13
		Total Unmitigated	409.95	65.20
Solar Electricity Generation		-81,830	-81.83	-13.01
		Total Mitigated	328.12	52.18

#### SCE Electricity Intensity Factor

#### CO<sub>2</sub>e (Metric Tons/MWh)

2025 0.159 Source: CalEEMod 2022 Users Guide, Appendix G, Table G-3.

A	nnual Energy Use	
	kWh/sq ft	kWh/KSF
Parking (Lighting)	0.876	0.000876
Source: CalEEMod 2022 Users	s Guide, Appendix D6,	Page D-21.