Stratford Ranch East

AIR QUALITY IMPACT ANALYSIS

CITY OF PERRIS

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LIST OF ABBREVIATED TERMS

%	Percent
°F	degrees Fahrenheit
µg/m^3	Microgram per Cubic Meter
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
AB 2595	California Clean Air Act
AQIA	air quality impact analysis
AQP	Air Quality Plans
BAAQMD	Bay Area Air Quality Management District
C_2H_3Cl	vinyl chloride
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California EPA
CALGreen	California Green Building Standards Code
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CO	carbon monoxide
COHb	carboxyhemoglobin
EIR	Environmental Impact Report
EMFAC	EMissions FACtor model
EPA	Environmental Protection Agency
g/L	gram/liter
GHG	greenhouse gas
H_2S	hydrogen sulfide
LST	Localized Significance Thresholds
LST Methodology	Final Localized Significance Threshold Methodology
MM	Mitigation Measures
Mph	miles per hour
MWELO	Model Water Efficient Landscape Ordinance
NAAQS	National Ambient Air Quality Standards
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides

O_2	oxygen
O_2 deficiency	chronic hypoxemia
O_3	ozone
Pb	Lead
PM	Particulate Matter
PM_{10}	Particulate matter 10 microns or less
$PM_{2.5}$	Particulate matter 2.5 microns or less
ppm	parts per million
Project	Wildomar Meadows Project
RECLAIM	Regional Clean Air Incentives Market
ROG	reactive organic gases
RTP	Regional Transportation Plan
Rule 1113	SCAQMD Rule 1113 - Architectural Coatings
Rule 403	SCAQMD Rule 403 - Fugitive Dust
Rule 445	SCAQMD Rule 445 – Wood-Burning Devices
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_4	sulfates
SOX	sulfur oxides
SRA	Source Receptor Area
TAC	toxic air contaminant
Title I	Non-Attainment Provisions
Title II	Mobile Source Provisions
VOC	Volatile Organic Compounds
vph	vehicles per hour

EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Stratford Ranch East Air Quality Impact Analysis* are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report	Significance Findings	
	Section	Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
Localized Construction Emissions	3.6	*Significant*	*Less Than Significant*
Localized Operation Emissions	3.6	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.7	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.8	*Less Than Significant*	*n/a*
Toxic Air Contaminants Analysis	3.9	*Less Than Significant*	*n/a*
Sensitive Receptors	3.10	*Less Than Significant*	*n/a*
Odors	3.11	*Less Than Significant*	*n/a*
Cumulative Impacts	3.12	*Less Than Significant*	*n/a*

ES.2 STANDARD REGULATORY REQUIREMENTS

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the City of Perris will ensure such language is incorporated prior to issuance of any development permits. South Coast Air Quality Management District (SCAQMD) Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust), Rule 445 (Wood-Burning Devices), and Rule 1113 (Architectural Coatings) (2) (3) (4). It should be noted that these Rules are not mitigation since they are regulatory requirements. As such, credit for Rule 403, Rule 445, and Rule 1113 have been taken.

RULE 403

The contractor shall adhere to applicable measures contained in Table 1 of Rule 403 including, but not limited to (2):

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.

- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- All access points to the Project site shall have track out devices installed.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are limited to 15 mph or less.

RULE 445

The following measures shall be incorporated into Project plans and specifications as implementation of SCAQMD Rule 445 (3):

- No wood burning devices shall be installed and any dwelling units consistent with SCAQMD Rule 445.

RULE 1113

The following measures shall be incorporated into Project plans and specifications as implementation of SCAQMD Rule 1113 (4):

- Only "Low-Volatile Organic Compounds (VOC)" paints consistent with SCAQMD Rule 1113 shall be used.

ES.3 CONSTRUCTION-SOURCE MITIGATION

Project construction emissions would not exceed applicable SCAQMD thresholds of significance. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

ES.4 OPERATIONAL-SOURCE MITIGATION MEASURES

Project operational emissions would not exceed applicable SCAQMD regional thresholds of significance. Therefore, Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

1 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) prepared by Urban Crossroads, Inc., for the proposed Stratford Ranch East (Project). The purpose of this AQIA is to evaluate the potential air quality impacts associated with construction and operation of the proposed Project and identify measures, as necessary, to reduce emissions in comparison to thresholds established by the SCAQMD.

1.1 SITE LOCATION

The proposed Project site is located on the northeast corner of Evans Road and Ramona Expressway, as shown on Exhibit 1-A. The Perris Reservoir and the Perris Auto Speedway Racetrack are located to northeast of the Project site 0.70 miles and 0.15 miles, respectively. Residential homes are located to the north, south and southwest of the Project site. The Project land use is consistent with the City of Perris General Plan land use designation and zoning.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of 197 single family detached residential dwelling units. The Project site plan is shown in Exhibit 1-B.

EXHIBIT 1-A: LOCATION MAP

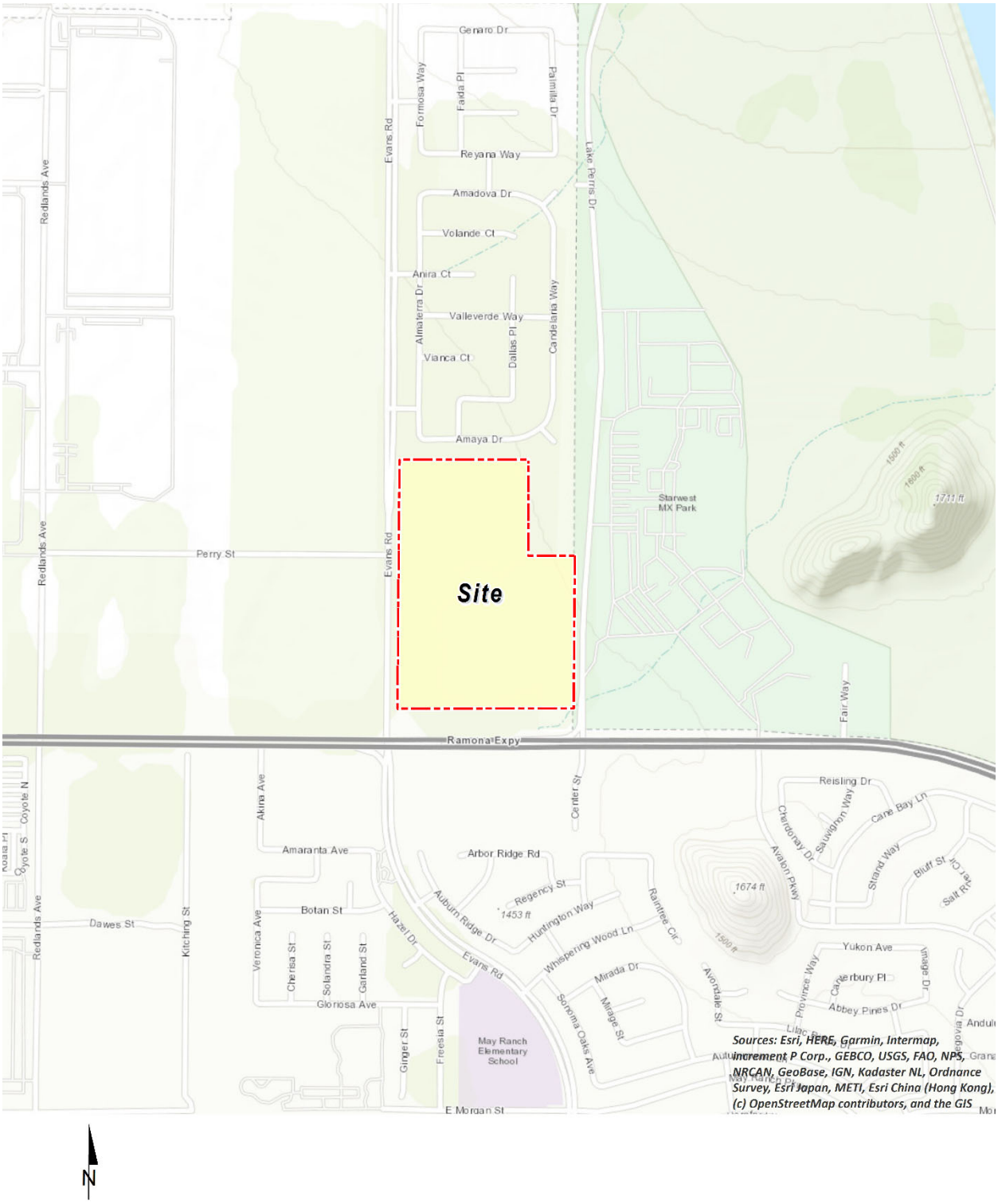
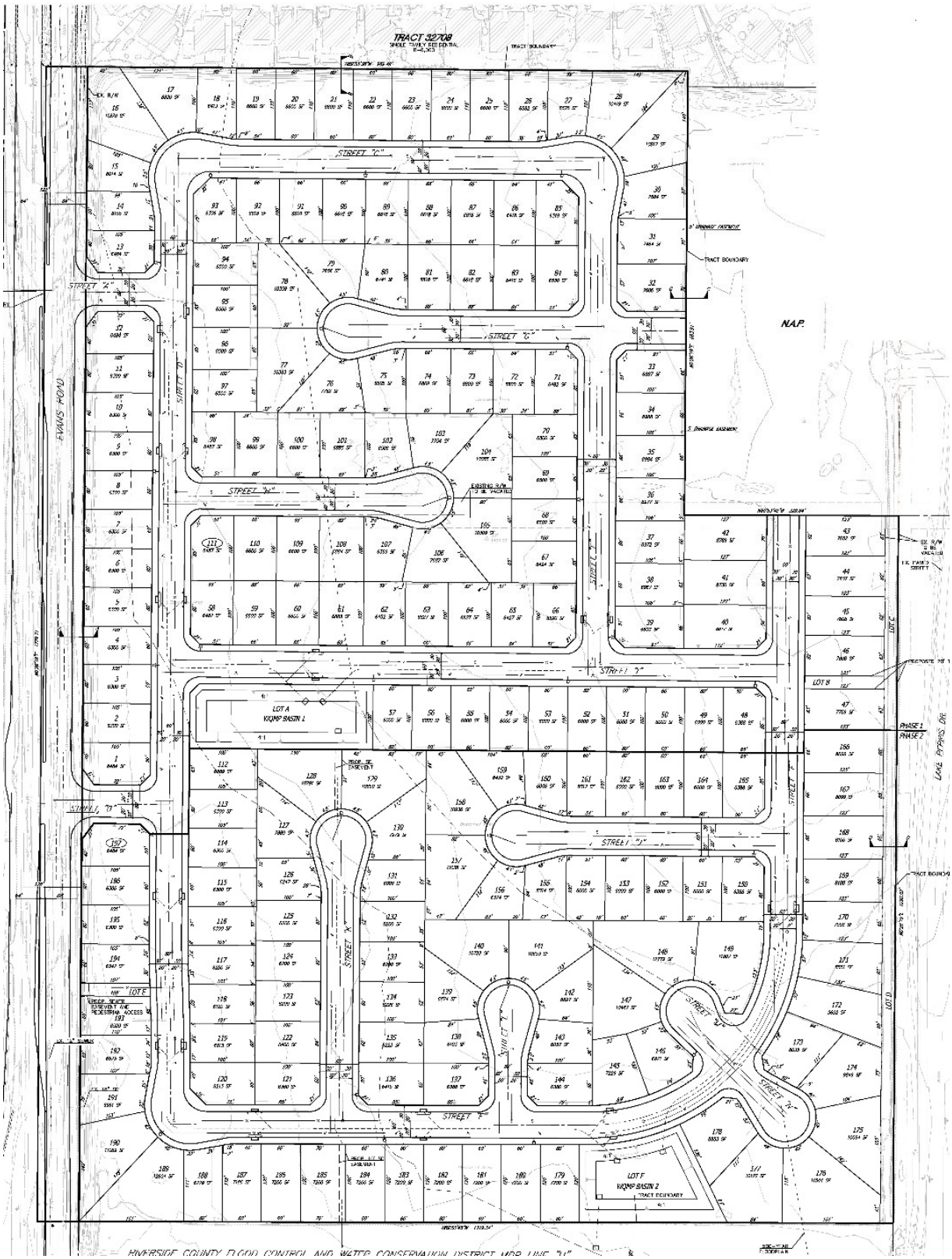


EXHIBIT 1-B: SITE PLAN



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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (5). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO_2) to sulfates (SO_4) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los

Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_X) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and

low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (6):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O_2) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O_2 transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency) as seen at high altitudes.

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms SO_4. Collectively, these pollutants are referred to as sulfur oxides (SO_X).	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
NO_X	NO_X consist of nitric oxide (NO) and nitrogen dioxide (NO_2) and five other compounds, which are formed when nitrogen (N) combines with oxygen. Their lifespan in the atmosphere ranges from one to seven days for NO and NO_2. NO_X is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring station.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the	Formed when reactive organic gases (ROG) and NO_X react in the presence of	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
	presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O_3 levels. O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
Particulate Matter (PM)	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. PM pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X, organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	A consistent correlation between elevated ambient fine PM (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to PM. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms)	Organic chemicals are widely used as ingredients in household	Breathing VOCs can irritate the eyes, nose and throat, can cause difficulty breathing and nausea, and can damage

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
	that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	products. Paints, varnishes and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was	Metal smelters, resource recovery, leaded gasoline,	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
	emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.	deterioration of Pb paint.	affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (7).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
			odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (8).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May ,4 2016 and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the U.S. Environmental Protection Agency (EPA) or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (9).

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards

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

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O_3, PM_{10}, $PM_{2.5}$, NO_2, and SO_2 which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (10). On February 21, 2019, CARB posted the 2018 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (11).

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb[1]	Attainment	Unclassifiable/Attainment

"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.7 LOCAL AIR QUALITY

The Project site is located within the Source Receptor Area (SRA) 24. Within SRA 24, the SCAQMD Perris Valley monitoring station, located 4.3 miles southwest of the Project site, is the nearest long-term air quality monitoring station for $O_3$and PM_{10}. The Perris Valley monitoring station does not include data for $PM_{2.5}$, CO, and NO_2. As such, the next nearest monitoring stations will be used. The Metropolitan Riverside County 3 monitoring station, located in SRA 23, is the next nearest monitoring station for $PM_{2.5}$, CO, and NO_2, and is located approximately 5 miles northwest of the Project site. It should be noted that the Metropolitan Riverside County 3 monitoring stations was utilized in lieu of the Perris Valley monitoring station only in instances where data was not available.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2017 through 2019 was obtained from the SCAQMD Air Quality Data Tables (12). Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

[1] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2017-2018

Pollutant	Standard	Year		
		2017	2018	2019
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.12	0.117	0.118
Maximum Federal 8-Hour Concentration (ppm)		0.105	0.103	0.095
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	33	31	26
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	80	67	64
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	2.2	2.6	2
Maximum Federal 8-Hour Concentration	> 20 ppm	2	2.4	1.3
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.063	0.054	0.056
Annual Federal Standard Design Value		0.0082	0.0085	0.007
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	75	64	97
Annual Federal Arithmetic Mean ($\mu g/m^3$)		32.2	29.7	25.3
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 $\mu g/m^3$	11	3	4
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	62.2	64.8	46.7
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	13.4	13.87	12.53
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	9	4	9

ppm= Parts Per Million
Source: SCAQMD Historical Air Quality Data By Year, Air Quality Data Tables.

2.8 REGULATORY BACKGROUND

2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb (13). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The federal CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (14). The federal CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (15) (16). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

2.8.2 CALIFORNIA REGULATIONS

CALIFORNIA AIR RESOURCES BOARD

The CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (17) (13).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Plans (AQP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;

- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards which became effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided, they establish a minimum 65% diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official.

Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2020.

The 2019 Title 24 standards result in less energy use, thereby reducing air pollutant emissions associated with energy consumption in the SCAB and across the State of California. For example, the 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting requirements for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7% less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will use about 53% less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30% less energy due to lighting upgrade requirements (18).

The 2019 CALGreen standards are applicable to the Project and require, among other items (19):

- During site development one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site (4.106.2).

  - Retention basins of sufficient size shall be utilized to retain storm water on the site.
  - Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
  - Compliance with a lawfully enacted storm water management ordinance.

- Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings (4.106.3).
- New residential construction shall facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) (4.106.4).
  - For one- and two-family dwelling units and townhomes with attached garages, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit for each dwelling unit (4.106.4.1).
  - Where 17 or more multifamily dwelling units are constructed on a building site, 3 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number (4.106.4.2).
    - Construction documents shall indicate the location of proposed EV spaces. At least one EV space shall be located in common use areas and available for use by all residents. (4.106.4.2.1)
  - All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.
    - The number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.3.1. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number (4.106.4.3.1).
- Comply with Title 24, Part 6 energy efficiency standards (4.201.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (4.303.1.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (4.303.1.2).

  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (4.303.1.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (4.303.1.3.2).
  - Faucets and fountains. Residential lavatory faucets shall have a maximum flow rate of note more than 1.2 gallons per minute at 60 psi (4.303.1.4.1). Lavatory faucets in common or public use areas shall have a maximum flow rate of note more than 0.5 gallons per minute at 60 psi (4.303.1.4.2). Metering faucets shall not deliver more than 0.25 gallons per cycle (4.303.1.4.3). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (4.303.1.4.4).

- Outdoor portable water use in landscaped areas. Residential developments with an aggregate area equal to or greater than 500 square feet shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (4.304.1).
- Newly constructed residential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, may be required to have recycled water supply systems installed, allowing the use of recycled water for residential landscape irrigation systems (4.305.1).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 4.401.1, 4.408.2; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building (4.410.1):
  - Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
  - Operation and maintenance instructions for the following:
  - Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
  - Roof and yard drainage, including gutters and downspouts.
  - Space conditioning systems, including condensers and air filters.
  - Landscape irrigation systems.
  - Water reuse systems.
  - Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
  - Public transportation and/or carpool options available in the area.
  - Educational material on the positive impacts of an interior relative humidity between 30—60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
  - Information about water-conserving landscape and irrigation design and controllers which conserve water.

  - Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
  - Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
  - Information about state solar energy and incentive programs available.
  - A copy of all special inspection verifications required by the enforcing agency or this code.
- Recycling by Occupants. Where 5 or more multi-family dwelling units, provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (4.410.2).

2.8.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the NAAQS and CAAQs (20). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.10.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard, contribute to an existing or projected air quality violation, or determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine consistency with the applicable AQMP, exposure of sensitive receptors to substantial pollutant concentrations, and the impacts of odors. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- 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 non-attainment under an applicable federal or state 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. affecting a substantial number of people.

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (21). The SCAQMD's CEQA Air Quality Significance Thresholds (April 2019) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Construction	Operations
NO_X	100 lbs./day	55 lbs./day
VOC	75 lbs./day	55 lbs./day
PM_{10}	150 lbs./day	150 lbs./day
$PM_{2.5}$	55 lbs./day	55 lbs./day
SO_X	150 lbs./day	150 lbs./day
CO	550 lbs./day	550 lbs./day
Pb	3 lbs./day	3 lbs./day

lbs./day = Pounds Per Day
Source: Regional Thresholds presented in this table are based on the SCAQMD Air Quality Significance Thresholds, April 2019

3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ANALYZE AIR QUALITY

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model (CalEEMod) Version 2016.3.2[2]. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation (22). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 and 3.3.

3.3.1 EMISSION FACTORS MODEL

EMISSION FACTORS MODEL

On August 19, 2019, the EPA approved the 2017 version of the EMissions FACtor model (EMFAC) web database for use in SIP and transportation conformity analyses. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (23). This AQIA utilizes summer, winter, and annual EMFAC2017 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season.

Because the EMFAC2017 emission rates are associated with vehicle fuel types while CalEEMod vehicle emission factors are aggregated to include all fuel types for each individual vehicle class, the EMFAC2017 emission rates for different fuel types of a vehicle class are averaged by activity or by population and activity to derive CalEEMod emission factors. Additionally, the EMFAC emission factors used in this analysis include adjustment factors for the SAFE Rule (24) (25). The equations applied to obtain CalEEMod vehicle emission factors for each emission type are detailed in CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* (26). EMFAC2017 emission rates utilized in this analysis can be found in Appendix 3.2 of this report.

3.4 CONSTRUCTION EMISSIONS

The Project is anticipated to be constructed in two phases, with 111 single family detached residential dwelling units constructed in the first phase and the remaining 86 single family detached residential dwelling units be constructed in Phase 2. Phase 1 is anticipated to have an opening year of 2023, and Phase 2 is anticipated to have an opening year of 2027. However, to

[2] In late June 2021, and subsequent to the modeling and preparation of this analysis, CAPCOA released CalEEMod version 2020.4.0, which incorporates EMFAC2017 emission factors including N_20, the effects of the federal SAFE Rule, the 2019 Energy Code, updated electricity intensity factors to account for RPS though 2019, and updated trip generation factors. Other improvements were related to specific air districts and the user interface. Based on Urban Crossroads experience, these emission estimates presented in this report exceed the emissions estimate from the newer model and are thus conservative and do not discount project impacts.

be conservative, the Project construction schedule is compressed and modeled as a single phase with an opening year of 2023 for all 197 single family detached residential dwelling units.

Construction activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Architectural Coating
- Paving

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. This analysis assumes that earthwork activities are expected to balance on site and no import or export of soils would be required.

CONSTRUCTION WORKER VEHICLE TRIPS

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on information from CalEEMod defaults.

3.4.1 CONSTRUCTION DURATION

Construction is expected to commence in May 2022 and will last through June 2023. The construction schedule utilized in the analysis, shown in Table 3-2, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[3] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA Guidelines. The duration of construction activities was based on CalEEMod defaults and an opening year of 2023.

TABLE 3-2: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days

[3] As shown in the CalEEMod User's Guide Version 2016.3.2, Section 4.3 "Offroad Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Site Preparation	5/1/2022	6/10/2022	30
Grading	6/11/2022	9/23/2022	75
Building Construction	9/24/2022	6/30/2023	200
Architectural Coating	4/10/2023	6/30/2023	60
Paving	4/17/2023	6/30/2023	55

Source: CalEEMod 2016, Appendix 3.1.

3.4.2 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment was generally based on CalEEMod 2016.3.2 defaults. A detailed summary of construction equipment assumptions by phase is provided at Table 3-3.

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Amount	Hours Per Day
Site Preparation	Crawler Tractors	4	8
Site Preparation	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	2	8
Grading	Excavators	2	8
Grading	Graders	1	8
Grading	Rubber Tired Dozers	1	8
Grading	Scrapers	2	8
Building Construction	Aerial Lifts	1	8
Building Construction	Cranes	1	8
Building Construction	Forklifts	7	8
Building Construction	Generator Sets	6	8
Building Construction	Tractors/Loaders/Backhoes	10	8
Paving	Pavers	2	8
Paving	Paving Equipment	2	8
Paving	Rollers	2	8
Architectural Coating	Air Compressors	2	6

Source: CalEEMod 2016, Appendix 3.1

3.4.3 CONSTRUCTION EMISSIONS SUMMARY

IMPACTS WITHOUT MITIGATION

CalEEMod calculates maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions with fugitive dust control as required by SCAQMD Rule 403 are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed criteria pollutant thresholds established by the SCAQMD.

TABLE 3-4: OVERALL CONSTRUCTION EMISSIONS SUMMARY

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2021	5.19	49.03	58.46	0.10	10.12	6.08
2022	43.29	57.70	77.15	0.13	3.53	2.84
Maximum Daily Summer Emissions	**43.29**	**57.70**	**77.15**	**0.13**	**10.12**	**6.08**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Winter						
2021	5.22	49.04	58.26	0.10	10.12	6.08
2022	43.33	57.71	76.85	0.13	3.53	2.84
Maximum Daily Winter Emissions	**43.33**	**57.71**	**76.85**	**0.13**	**10.12**	**6.08**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions

3.5.1 AREA SOURCE EMISSIONS

ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using CalEEMod.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.5.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the Regional Clean Air Incentives Market (RECLAIM), which provides pollution credits for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod.

TITLE 24 ENERGY EFFICIENCY STANDARDS

California's Energy Efficiency Standards for Residential and Nonresidential Buildings was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity. The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020.

3.5.3 MOBILE SOURCE EMISSIONS

Project mobile source air quality impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project-related operational air quality impacts are derived primarily from the 1,860 vehicle trips generated by the Project. Trip characteristics available from the TIA report were utilized in this analysis (27).

FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of brake and tire wear particulates. The emissions estimates for travel on paved roads were calculated using CalEEMod.

3.5.4 OPERATIONAL EMISSIONS SUMMARY

IMPACTS WITHOUT MITIGATION

Operational activities for summer and winter scenarios are presented in Table 3-5. Detailed operational model outputs are presented in Appendix 3.1. Project operational-source emissions will not exceed the thresholds of significance and a significant impact will not occur.

TABLE 3-5: SUMMARY OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Area Source	8.50	3.46	17.65	0.02	0.35	0.35
Energy Source	0.10	0.87	0.37	0.01	0.07	0.07
Mobile Source Passenger Cars	4.58	11.44	43.61	0.14	14.11	3.84
Maximum Daily Summer Emissions	**13.18**	**15.77**	**61.63**	**0.17**	**14.54**	**4.26**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Winter						
Area Source	8.50	3.46	17.65	0.02	0.35	0.35
Energy Source	0.10	0.87	0.37	0.01	0.07	0.07
Mobile Source Passenger Cars	4.38	11.86	39.00	0.14	14.11	3.84
Maximum Daily Winter Emissions	**12.98**	**16.19**	**57.02**	**0.16**	**14.53**	**4.26**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod, Appendix 3.1

3.6 LOCALIZED EMISSIONS

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (28). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the NAAQS and CAAQS. Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (29).

APPLICABILITY OF LSTS FOR THE PROJECT

For this Project, the appropriate SRA for the LST analysis is the SCAQMD Perris Valley (SRA 24). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- Identify the maximum daily on-site emissions that will occur during construction activity:
    - The maximum daily on-site emissions could be based on information provided by the Project Applicant; or
    - The SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* can be used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (30) (26).
- If the total acreage disturbed is less than or equal to 5 acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be compared to CalEEMod outputs.
- If the total acreage disturbed is greater than 5 acres per day, then LST impacts may still be conservatively evaluated using the LST look-up tables for a 5-acre disturbance area. Use of the 5-acre disturbance area thresholds can be used to show that even if the daily emissions from all construction activity were emitted within a 5-acre area, and therefore concentrated over a smaller area which would result in greater site adjacent concentrations, the impacts would still be less than significant if the applicable 5-acre thresholds are utilized.
- The *LST Methodology* presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

EMISSIONS CONSIDERED

SCAQMD's LST Methodology clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (28)." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

MAXIMUM DAILY DISTURBED-ACREAGE

The "acres disturbed" for analytical purposes are based on specific equipment type for each subcategory of construction activity and the estimated maximum area a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3-7). The equipment-specific grading rates are summarized in the SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* (30) (26). It should be noted that the disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day.

It should be noted that although Appendix A only identifies equipment-specific grading rates for Crawler Tractors, Graders, Rubber Tired Dozers, and Scrapers, therefore Tractors/Loaders/Backhoes equipment that was included in site preparation or grading was replaced with crawler tractors that we adjusted to reflect the horsepower and operating profile of the Tractors/Loaders/Backhoes equipment class.

As shown on Table 3-6, the proposed Project's construction activities could actively disturb approximately 3.5 acres per day during site preparation and 5 acres per day for grading activities.

TABLE 3-6: MAXIMUM DAILY DISTURBED-ACREAGE

Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Site Preparation	Crawler Tractors	4	0.5	8	2
	Rubber Tired Dozers	3	0.5	8	1.5
Total acres disturbed per day during Site Preparation					3.5
Grading	Crawler Tractors	2	0.5	8	1
	Excavators	2	0.5	8	1
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
	Scrapers	2	1	8	2
Total acres disturbed per day during Grading					5
Maximum acres disturbed per day					**5**

Source: CalEEMod 2016, User Manual Appendix A.

SENSITIVE RECEPTORS

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, individuals with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as "sensitive receptors". These structures typically include residences, hotels, hospitals, etc. as they are also known to be locations where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site (in this case the nearest residential land use) has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

Commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for eight hours or less. The LST Methodology explicitly states that "*LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours* (28)." For purposes of analysis, if an industrial/commercial use is located at a closer distance to the Project site than the nearest

residential use, the nearest industrial/commercial use will be utilized to determine construction and operational LST air impacts for emissions of NO_2 and CO an individual could be present at these sites for periods of one to eight hours.

Project-related Sensitive Receptors

Receptors in the Project study area are described below and are shown on Exhibit 3-A.

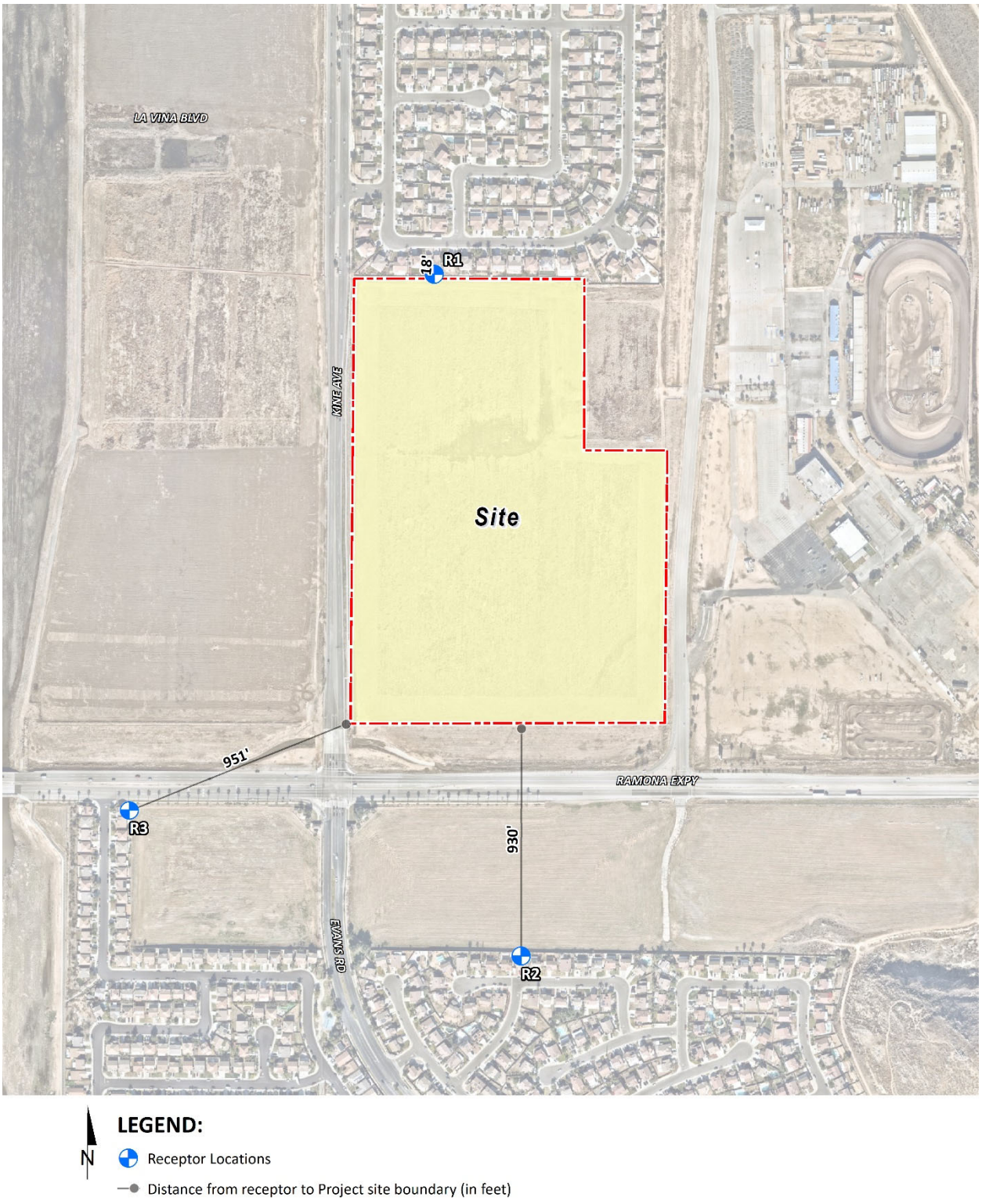
R1: Location R1 represents the existing residence at 825 Amaya Drive, approximately 18 feet north of the Project site. Receiver R1 is placed at the private outdoor living area (backyard).

R2: Location R2 represents the existing residence at 914 Arbor Ridge Road, approximately 930 feet south of the Project site. Receiver R2 is placed at the private outdoor living area (backyard

R3: Location R3 represents the existing residence at 3899 Akina Avenue, approximately 951 feet southwest of the Project site. Receiver R3 is placed at the private outdoor living area (backyard).

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual and cumulatively significant impact. As such, the nearest receptor to evaluate localized impacts of PM_{10}, $PM_{2.5}$, NO_2, and CO, is the existing residential home, represented by location R4, which is located approximately 12feet north of the Project.

EXHIBIT 3-A: SENSITIVE RECEPTOR LOCATIONS



CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

Localized Thresholds for Construction Activity

SCAQMD's screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identifies thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance thresholds. Consistent with SCAQMD guidance, the thresholds presented in Table 3-7 were calculated by interpolating the threshold values for the Project's disturbed acreage.

TABLE 3-7: MAXIMUM DAILY LOCALIZED EMISSIONS THRESHOLDS

Pollutant	Construction Localized Thresholds[1]
NO_X	270 Lbs./day
CO	1,577 Lbs./day
PM_{10}	13 Lbs./day
$PM_{2.5}$	8 Lbs./day

[1] Based on 5 acres of disturbance at 25 meter distance for SRA 24.
Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

Localized Construction-Source Emissions

Impacts without Mitigation

Table 3-8 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. As shown in Table 3-8, after compliance with Rule 403, localized construction emissions would exceed the applicable SCAQMD LSTs. Outputs from the model runs for construction LSTs are provided in Appendix 3.1 under the "mitigated" emissions output.

TABLE 3-8: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION (WITHOUT MITIGATION)

On-Site Site Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	56.0	73.5	10.0	6.0
SCAQMD Localized Threshold	270	1,577	13	8
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: CalEEMod, Appendix 3.1.

As stated in Section ES.3, Rule 403 requires that feasible dust control measure be implemented, including at a minimum applying water to active construction areas 3 times per day, installing track-out devices at access points, and halting operations during high wind events.

OPERATIONAL-SOURCE EMISSIONS LST ANALYSIS

The proposed project is located on approximately 46.2 acres. As previously stated, the total development is proposed to consist of 197 single family detached residential dwelling units. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may

spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The proposed project does not include such uses, and thus, due to the lack of significant stationary source emissions, no LST analysis is needed for operations.

3.7 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific CO "hot spots" is not needed to reach this conclusion. An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO (31).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 2-3.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards, as shown on Table 3-9.

TABLE 3-9: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	4.2
Sunset Boulevard/Highland Avenue	4	4.5	3.9
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.8
Long Beach Boulevard/Imperial Highway	3	3.1	9.3

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak CO concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, a 9.3 ppm 8-hour CO concentration was measured at the Long Beach Boulevard and Imperial Highway intersection, which was the highest CO generating intersection within the "hot spot" analysis. However, the SCAQMD determined that only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 8.6 ppm

were due to the ambient air measurements at the time the 2003 AQMP was prepared (32). In contrast, the ambient 8-hour CO concentration within the Project study area is estimated at 1.1 ppm—1.6 ppm (please refer to previous Table 2-3).

The traffic volumes used in the 2003 AQMP "hot spot" analysis are shown on Table 3-10. The busiest intersection evaluated for AM traffic volumes was at Wilshire Boulevard and Veteran Avenue, which had an AM traffic volume of approximately 8,062 vph (33). The 2003 AQMP calculated that the highest 1-hour concentration for the intersection of Wilshire Boulevard and Veteran Avenue was 4.6 ppm. This indicates that, should the hourly traffic volume increase four times to 32,250 vehicles per hour, CO concentrations (4.6 ppm x 4 = 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).[4]

TABLE 3-10: TRAFFIC VOLUMES

Intersection Location	Total (AM/PM)				
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph) —or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (34).

The proposed Project considered herein would generate 1,860 trips and would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study or based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

3.8 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation

[4] Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In March 2017, the AQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (35). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan (RTP)/ Sustainable Communities Strategy (SCS), a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (36). The Project's consistency with the AQMP will be determined using the 2016 AQMP as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993) (37). These indicators are discussed below:

Consistency Criterion No. 1: The proposed 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.

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs or regional significance thresholds were exceeded. Based on the analysis herein compliance with SCAQMD Rule 403, the Project's localized construction-source emissions would not exceed applicable regional significance thresholds or LST. As such, the Project is consistent with the AQMP with regard to regional construction-source air quality.

Operational Impacts – Consistency Criterion 1

As evaluated, the Project's localized operational-source emissions would not exceed applicable localized or regional significance thresholds. As such, the Project would not result in a significant impact with respect to this criterion.

On the basis of the preceding discussion, and the lack of thresholds exceedances the Project is determined to be consistent with the first criterion.

Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The 2016 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Perris General Plan is considered to be consistent with the AQMP***.***

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities.

Operational Impacts – Consistency Criterion 2

The City of Perris General Plan designates the Project site Specific Plan (SP). The "Specific Plan" land use designation allows for a variety of uses, densities and building intensities on parcels of seventy-five or more acres subject to a master site plan and comprehensive development standards that provide for flexibility in design, creation of unique neighborhoods, amenities including parks and inclusion of appropriate infrastructure (38). As previously stated, the total development is proposed to consist of 197 single family detached residential dwelling units. The residential uses proposed by the Project applicant are consistent with the City's land use designation and therefore, the Project would not exceed the SCAG and AQMP growth projection for the City of Perris. As such, the Project would not conflict or obstruct with the goals and objectives of the AQMP.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

AQMP Consistency Conclusion

The Project would not result in or cause NAAQS or CAAQS violations, as such, the Project is considered to be consistent with the AQMP.

3.9 TOXIC AIR CONTAMINANTS

CONSTRUCTION ACTIVITY

During short-term construction activity, the Project will also result in some diesel particulate matter (DPM) which is a listed carcinogen and toxic air contaminant (TAC) in the State of California. The 2015 Office of Environmental Health Hazard Assessment (OEHHA) revised risk assessment guidelines suggest that construction projects as short as 2-6 months may warrant evaluation. Notwithstanding, based on Urban Crossroad's professional opinion and experience in preparing health risk assessments for development projects, given the distance of the Project

from surrounding sensitive receptors, the dominant wind patterns blowing to the northwest away for receptors, and the annual $PM_{2.5}$ emissions from equipment during each year of construction, any DPM generated from construction activity would result in less than significant ground level concentrations of DPM and not result in a significant health risks and no further evaluation is required.

Furthermore, many air districts throughout the state, including the SCAQMD, are currently evaluating the applicability of age sensitivity factors and have not established CEQA guidance. More specifically in their response to comments received on SCAQMD New Source Review rule, the SCAQMD explicitly states that:

"The Proposed Amended Rules are separate from the CEQA significance thresholds. The SCAQMD staff is currently evaluating how to implement the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will evaluate a variety of options on how to evaluate health risks under the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will conduct public workshops to gather input before bringing recommendations to the Governing Board. In the interim, staff will continue to use the previous guidelines for CEQA determinations."

OPERATION ACTIVITIES

The project proposes residential land uses, which are not known emitters of substantial TAC concentrations. The project itself does not include any significant source of TACs that would potentially affect sensitive receptors. Land uses in the vicinity of the project include residential land uses to the north, and south. None of these land uses are typically associated with the emission of TACs. Additionally, as stated in the *Air Quality and Land Use Handbook: A Community Health Perspective* the concern for residential land uses is generally limited to siting new development within 500 feet of a freeway or constructing a new freeway within 500 feet of existing residences. The Project site is located over 13,000 feet from I-215 and exposure of persons on the project site would be less than significant.

3.10 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered as sensitive receptors.

Results of the LST analysis indicate that even with application of all feasible mitigation, the Project will still exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would be exposed to substantial criteria pollutant concentrations during Project construction, and this is considered a significant impact.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

3.11 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project is residential and does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required (39).

3.12 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (40). In this report the AQMD clearly states (Page D-3):

> *…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or Environmental Impact Report (EIR). The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions.*

> *The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that, with compliance with Rule 403, Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operational Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project operational-source emissions would not exceed the applicable SCAQMD regional thresholds of significance. Therefore, Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

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5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Stratford Ranch East Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (619) 788-1971.

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EDUCATION

Bachelor of Science in Urban and Regional Planning
California Polytechnic State University, Pomona • June 2000

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
APA – American Planning Association
AWMA – Air and Waste Management Association

PROFESSIONAL CERTIFICATIONS``

HARP Model Training – Bluescape Environmental • 2004
Air Dispersion Modeling – Lakes Environmental • 2008
2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006

Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 3.1:
CALEEMOD EMISSIONS MODEL OUTPUTS

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Stratford Ranch Residential - TTM 38071

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	197.00	Dwelling Unit	48.62	354,600.00	563

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	518.69	**CH4 Intensity (lb/MWhr)**	0.021	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SEC will have 41.33% renewalbles in 2023 = CO2: 518.69, CH4: 0.0214, and N20; 0.0046 lbs/MWh

Land Use - Based on Porject plan 2/24/21

Construction Phase - Buidling construction revised based to meet a mid 2023 opening year, paving and arichitectural coating overlapped with building construction to represent a reasonable worst case condition

Off-road Equipment - standard 8 hour day, double equipment

Off-road Equipment - No welders, replaced with genset, tractor increase eqquipment to account for shortened building schedule, standard 8-hour schedule

Off-road Equipment - Tractor/loader/backhoe replaced with crawler tractor for PM generation, crawler HP and load factor adjusted to represent Tractor/Loaders/Backhoes

Off-road Equipment - No Change

Off-road Equipment - Tractor/loader/backhoe replaced with crawler tractor for PM generation, crawler HP and load factor adjusted to represent Tractor/Loaders/Backhoes

Grading - The entire site that would be graded and is 48.62 acres, only 53 CY will be exported, project site plan

Architectural Coating -

Vehicle Trips - Based on TIA

Vehicle Emission Factors - EMFAC2017 with Adjustment Factors for Safe Rule

Vehicle Emission Factors - EMFAC2017 with Adjustment Factors for Safe Rule

Vehicle Emission Factors - EMFAC2017 with Adjustment Factors for Safe Rule

Woodstoves - SACQMD Rule 445 No Wood Burning FP below 3,000' AMSL

Energy Use - Accounts for 53% increase in efficency over 2016 building code.

Water And Wastewater - Accounts for 2019 Greenbuilding code and MWELO

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 requires watering of site 3x daily, porject will be required to install trackout, reduction taken from Rule 403 mitigation tables during site prep and grading

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblConstructionPhase	NumDays	740.00	200.00
tblConstructionPhase	NumDays	55.00	60.00
tblEnergyUse	LightingElect	1,608.84	756.15
tblEnergyUse	T24E	951.67	447.28

tblEnergyUse	T24NG	24,566.15	11,546.09
tblFireplaces	NumberGas	167.45	197.00
tblFireplaces	NumberNoFireplace	19.70	0.00
tblFireplaces	NumberWood	9.85	0.00
tblFleetMix	HHD	0.03	0.04
tblFleetMix	LDA	0.55	0.55
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.20	0.20
tblFleetMix	LHD1	0.02	0.02
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tblFleetMix	MH	8.6800e-004	0.00
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	2.1230e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7800e-003	0.00
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tblGrading	AcresOfGrading	60.00	48.62
tblGrading	MaterialExported	0.00	53.00
tblLandUse	LotAcreage	63.96	48.62
tblOffRoadEquipment	HorsePower	212.00	97.00
tblOffRoadEquipment	HorsePower	212.00	97.00
tblOffRoadEquipment	HorsePower	63.00	46.00
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tblOffRoadEquipment	LoadFactor	0.43	0.37
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	7.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	10.00
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tblOffRoadEquipment	UsageHours	7.00	8.00
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tblProjectCharacteristics	CO2IntensityFactor	702.44	518.69
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
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tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	1.9480e-003	1.3050e-003
tblVehicleEF	LDA	2.2420e-003	1.7590e-003
tblVehicleEF	LDA	1.7950e-003	1.2020e-003
tblVehicleEF	LDA	2.0620e-003	1.6170e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	6.8280e-003
tblVehicleEF	LDA	0.04	0.22

tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.4920e-003	2.4260e-003
tblVehicleEF	LDA	5.6400e-004	5.1000e-004
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	9.9310e-003
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDT1	0.01	5.7490e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.36	1.22
tblVehicleEF	LDT1	2.49	2.28
tblVehicleEF	LDT1	319.06	298.87
tblVehicleEF	LDT1	67.76	63.71
tblVehicleEF	LDT1	0.13	0.10
tblVehicleEF	LDT1	2.9770e-003	1.8930e-003
tblVehicleEF	LDT1	3.2520e-003	2.5560e-003
tblVehicleEF	LDT1	2.7410e-003	1.7420e-003
tblVehicleEF	LDT1	2.9900e-003	2.3500e-003
tblVehicleEF	LDT1	0.13	0.16
tblVehicleEF	LDT1	0.25	0.22
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.16	0.73
tblVehicleEF	LDT1	0.17	0.37
tblVehicleEF	LDT1	3.2070e-003	2.9210e-003

tblVehicleEF	LDT1	7.2100e-004	6.2300e-004
tblVehicleEF	LDT1	0.13	0.16
tblVehicleEF	LDT1	0.25	0.23
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.16	0.74
tblVehicleEF	LDT1	0.19	0.40
tblVehicleEF	LDT1	0.01	6.4140e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.50	1.44
tblVehicleEF	LDT1	2.12	1.91
tblVehicleEF	LDT1	334.98	320.06
tblVehicleEF	LDT1	67.76	62.93
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	2.9770e-003	1.8930e-003
tblVehicleEF	LDT1	3.2520e-003	2.5560e-003
tblVehicleEF	LDT1	2.7410e-003	1.7420e-003
tblVehicleEF	LDT1	2.9900e-003	2.3500e-003
tblVehicleEF	LDT1	0.21	0.30
tblVehicleEF	LDT1	0.27	0.26
tblVehicleEF	LDT1	0.15	0.22
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.15	0.72
tblVehicleEF	LDT1	0.15	0.31
tblVehicleEF	LDT1	3.3680e-003	3.1280e-003
tblVehicleEF	LDT1	7.1500e-004	6.1500e-004
tblVehicleEF	LDT1	0.21	0.30

tblVehicleEF	LDT1	0.27	0.26
tblVehicleEF	LDT1	0.15	0.22
tblVehicleEF	LDT1	0.05	0.04
tblVehicleEF	LDT1	0.15	0.72
tblVehicleEF	LDT1	0.16	0.34
tblVehicleEF	LDT1	0.01	5.6560e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.31	1.18
tblVehicleEF	LDT1	2.56	2.26
tblVehicleEF	LDT1	313.74	295.29
tblVehicleEF	LDT1	67.76	63.68
tblVehicleEF	LDT1	0.12	0.10
tblVehicleEF	LDT1	2.9770e-003	1.8930e-003
tblVehicleEF	LDT1	3.2520e-003	2.5560e-003
tblVehicleEF	LDT1	2.7410e-003	1.7420e-003
tblVehicleEF	LDT1	2.9900e-003	2.3500e-003
tblVehicleEF	LDT1	0.12	0.16
tblVehicleEF	LDT1	0.28	0.26
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.19	0.86
tblVehicleEF	LDT1	0.17	0.36
tblVehicleEF	LDT1	3.1530e-003	2.8860e-003
tblVehicleEF	LDT1	7.2200e-004	6.2200e-004
tblVehicleEF	LDT1	0.12	0.16
tblVehicleEF	LDT1	0.28	0.26
tblVehicleEF	LDT1	0.10	0.11

tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.19	0.86
tblVehicleEF	LDT1	0.19	0.40
tblVehicleEF	LDT2	5.9480e-003	3.1840e-003
tblVehicleEF	LDT2	5.6730e-003	0.06
tblVehicleEF	LDT2	0.75	0.79
tblVehicleEF	LDT2	1.24	2.59
tblVehicleEF	LDT2	356.06	314.22
tblVehicleEF	LDT2	75.77	67.26
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	1.9880e-003	1.3480e-003
tblVehicleEF	LDT2	2.3560e-003	1.7950e-003
tblVehicleEF	LDT2	1.8280e-003	1.2410e-003
tblVehicleEF	LDT2	2.1660e-003	1.6510e-003
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.5660e-003	3.0700e-003
tblVehicleEF	LDT2	7.7800e-004	6.5700e-004
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39

tblVehicleEF	LDT2	0.08	0.31
tblVehicleEF	LDT2	6.3690e-003	3.5750e-003
tblVehicleEF	LDT2	5.0330e-003	0.05
tblVehicleEF	LDT2	0.83	0.94
tblVehicleEF	LDT2	1.06	2.16
tblVehicleEF	LDT2	374.47	334.38
tblVehicleEF	LDT2	75.77	66.44
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	1.9880e-003	1.3480e-003
tblVehicleEF	LDT2	2.3560e-003	1.7950e-003
tblVehicleEF	LDT2	1.8280e-003	1.2410e-003
tblVehicleEF	LDT2	2.1660e-003	1.6510e-003
tblVehicleEF	LDT2	0.07	0.15
tblVehicleEF	LDT2	0.10	0.14
tblVehicleEF	LDT2	0.07	0.13
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.24
tblVehicleEF	LDT2	3.7510e-003	3.2670e-003
tblVehicleEF	LDT2	7.7500e-004	6.4900e-004
tblVehicleEF	LDT2	0.07	0.15
tblVehicleEF	LDT2	0.10	0.14
tblVehicleEF	LDT2	0.07	0.13
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.27
tblVehicleEF	LDT2	5.8200e-003	3.1320e-003

tblVehicleEF	LDT2	5.8050e-003	0.06
tblVehicleEF	LDT2	0.72	0.76
tblVehicleEF	LDT2	1.27	2.57
tblVehicleEF	LDT2	349.95	310.81
tblVehicleEF	LDT2	75.77	67.23
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	1.9880e-003	1.3480e-003
tblVehicleEF	LDT2	2.3560e-003	1.7950e-003
tblVehicleEF	LDT2	1.8280e-003	1.2410e-003
tblVehicleEF	LDT2	2.1660e-003	1.6510e-003
tblVehicleEF	LDT2	0.04	0.08
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.5050e-003	3.0370e-003
tblVehicleEF	LDT2	7.7900e-004	6.5700e-004
tblVehicleEF	LDT2	0.04	0.08
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LHD1	5.2150e-003	4.5410e-003
tblVehicleEF	LHD1	9.8020e-003	4.4200e-003
tblVehicleEF	LHD1	0.02	0.01

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.74	0.60
tblVehicleEF	LHD1	2.42	0.89
tblVehicleEF	LHD1	9.02	9.36
tblVehicleEF	LHD1	594.74	619.96
tblVehicleEF	LHD1	31.51	9.99
tblVehicleEF	LHD1	0.07	0.08
tblVehicleEF	LHD1	1.09	1.39
tblVehicleEF	LHD1	8.6400e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.8040e-003	0.01
tblVehicleEF	LHD1	8.9300e-004	2.1100e-004
tblVehicleEF	LHD1	8.2600e-004	9.6900e-004
tblVehicleEF	LHD1	2.5390e-003	2.5170e-003
tblVehicleEF	LHD1	9.3560e-003	9.8330e-003
tblVehicleEF	LHD1	8.2100e-004	1.9400e-004
tblVehicleEF	LHD1	3.0350e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8020e-003	1.2620e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.30	0.44
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	5.8330e-003	6.0260e-003
tblVehicleEF	LHD1	3.6000e-004	9.9000e-005
tblVehicleEF	LHD1	3.0350e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8020e-003	1.2620e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.30	0.44
tblVehicleEF	LHD1	0.26	0.07
tblVehicleEF	LHD1	5.2150e-003	4.5540e-003
tblVehicleEF	LHD1	0.01	4.4900e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.75	0.61
tblVehicleEF	LHD1	2.30	0.84
tblVehicleEF	LHD1	9.02	9.36
tblVehicleEF	LHD1	594.74	619.98
tblVehicleEF	LHD1	31.51	9.91
tblVehicleEF	LHD1	0.07	0.08
tblVehicleEF	LHD1	1.02	1.31
tblVehicleEF	LHD1	8.6400e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.8040e-003	0.01
tblVehicleEF	LHD1	8.9300e-004	2.1100e-004
tblVehicleEF	LHD1	8.2600e-004	9.6900e-004
tblVehicleEF	LHD1	2.5390e-003	2.5170e-003
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tblVehicleEF	LHD1	8.2100e-004	1.9400e-004
tblVehicleEF	LHD1	4.7330e-003	4.2440e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	2.7000e-003	2.4050e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.29	0.44
tblVehicleEF	LHD1	0.23	0.06
tblVehicleEF	LHD1	5.8330e-003	6.0260e-003
tblVehicleEF	LHD1	3.5800e-004	9.8000e-005
tblVehicleEF	LHD1	4.7330e-003	4.2440e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.7000e-003	2.4050e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.29	0.44
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	5.2150e-003	4.5430e-003
tblVehicleEF	LHD1	9.7560e-003	4.4280e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.73	0.60
tblVehicleEF	LHD1	2.43	0.88
tblVehicleEF	LHD1	9.02	9.36
tblVehicleEF	LHD1	594.74	619.96
tblVehicleEF	LHD1	31.51	9.98
tblVehicleEF	LHD1	0.07	0.08
tblVehicleEF	LHD1	1.07	1.37
tblVehicleEF	LHD1	8.6400e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.8040e-003	0.01

tblVehicleEF	LHD1	8.9300e-004	2.1100e-004
tblVehicleEF	LHD1	8.2600e-004	9.6900e-004
tblVehicleEF	LHD1	2.5390e-003	2.5170e-003
tblVehicleEF	LHD1	9.3560e-003	9.8330e-003
tblVehicleEF	LHD1	8.2100e-004	1.9400e-004
tblVehicleEF	LHD1	3.0640e-003	2.4970e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7650e-003	1.3210e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.32	0.47
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	5.8330e-003	6.0260e-003
tblVehicleEF	LHD1	3.6100e-004	9.9000e-005
tblVehicleEF	LHD1	3.0640e-003	2.4970e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7650e-003	1.3210e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.32	0.47
tblVehicleEF	LHD1	0.26	0.07
tblVehicleEF	LHD2	3.6920e-003	2.7700e-003
tblVehicleEF	LHD2	3.6770e-003	3.2640e-003
tblVehicleEF	LHD2	7.3690e-003	7.1780e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.32	0.44
tblVehicleEF	LHD2	1.21	0.48

tblVehicleEF	LHD2	13.71	14.92
tblVehicleEF	LHD2	607.87	614.92
tblVehicleEF	LHD2	26.42	6.42
tblVehicleEF	LHD2	0.09	0.12
tblVehicleEF	LHD2	0.68	1.52
tblVehicleEF	LHD2	1.1660e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.0030e-003	0.01
tblVehicleEF	LHD2	4.2200e-004	9.8000e-005
tblVehicleEF	LHD2	1.1160e-003	1.4470e-003
tblVehicleEF	LHD2	2.6680e-003	2.7370e-003
tblVehicleEF	LHD2	8.6000e-003	0.01
tblVehicleEF	LHD2	3.8800e-004	9.1000e-005
tblVehicleEF	LHD2	1.0790e-003	1.1190e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	6.9700e-004	6.1300e-004
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.07	0.19
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	1.3400e-004	1.4200e-004
tblVehicleEF	LHD2	5.9190e-003	5.9160e-003
tblVehicleEF	LHD2	2.8600e-004	6.4000e-005
tblVehicleEF	LHD2	1.0790e-003	1.1190e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.9700e-004	6.1300e-004

tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.19
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	3.6920e-003	2.7770e-003
tblVehicleEF	LHD2	3.7200e-003	3.2860e-003
tblVehicleEF	LHD2	7.1240e-003	6.9030e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.32	0.45
tblVehicleEF	LHD2	1.16	0.45
tblVehicleEF	LHD2	13.71	14.92
tblVehicleEF	LHD2	607.87	614.93
tblVehicleEF	LHD2	26.42	6.38
tblVehicleEF	LHD2	0.09	0.12
tblVehicleEF	LHD2	0.64	1.43
tblVehicleEF	LHD2	1.1660e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.0030e-003	0.01
tblVehicleEF	LHD2	4.2200e-004	9.8000e-005
tblVehicleEF	LHD2	1.1160e-003	1.4470e-003
tblVehicleEF	LHD2	2.6680e-003	2.7370e-003
tblVehicleEF	LHD2	8.6000e-003	0.01
tblVehicleEF	LHD2	3.8800e-004	9.1000e-005
tblVehicleEF	LHD2	1.6790e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.0330e-003	1.1680e-003
tblVehicleEF	LHD2	0.04	0.06

tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.10	0.03
tblVehicleEF	LHD2	1.3400e-004	1.4200e-004
tblVehicleEF	LHD2	5.9190e-003	5.9160e-003
tblVehicleEF	LHD2	2.8500e-004	6.3000e-005
tblVehicleEF	LHD2	1.6790e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.0330e-003	1.1680e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	3.6920e-003	2.7710e-003
tblVehicleEF	LHD2	3.6660e-003	3.2670e-003
tblVehicleEF	LHD2	7.4110e-003	7.1290e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.32	0.44
tblVehicleEF	LHD2	1.22	0.47
tblVehicleEF	LHD2	13.71	14.92
tblVehicleEF	LHD2	607.87	614.92
tblVehicleEF	LHD2	26.42	6.42
tblVehicleEF	LHD2	0.09	0.12
tblVehicleEF	LHD2	0.67	1.49
tblVehicleEF	LHD2	1.1660e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.0030e-003	0.01
tblVehicleEF	LHD2	4.2200e-004	9.8000e-005

tblVehicleEF	LHD2	1.1160e-003	1.4470e-003
tblVehicleEF	LHD2	2.6680e-003	2.7370e-003
tblVehicleEF	LHD2	8.6000e-003	0.01
tblVehicleEF	LHD2	3.8800e-004	9.1000e-005
tblVehicleEF	LHD2	1.0460e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	6.6900e-004	6.3500e-004
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.10	0.03
tblVehicleEF	LHD2	1.3400e-004	1.4200e-004
tblVehicleEF	LHD2	5.9190e-003	5.9160e-003
tblVehicleEF	LHD2	2.8600e-004	6.3000e-005
tblVehicleEF	LHD2	1.0460e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6900e-004	6.3500e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	MCY	0.51	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.57	18.85
tblVehicleEF	MCY	9.66	8.64
tblVehicleEF	MCY	183.25	207.60
tblVehicleEF	MCY	44.44	60.36

tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	2.3160e-003	1.7970e-003
tblVehicleEF	MCY	3.5910e-003	2.7750e-003
tblVehicleEF	MCY	2.1630e-003	1.6800e-003
tblVehicleEF	MCY	3.3760e-003	2.6090e-003
tblVehicleEF	MCY	1.17	1.43
tblVehicleEF	MCY	0.66	0.79
tblVehicleEF	MCY	0.69	0.76
tblVehicleEF	MCY	2.45	2.11
tblVehicleEF	MCY	0.59	1.77
tblVehicleEF	MCY	2.04	1.83
tblVehicleEF	MCY	2.2100e-003	2.0540e-003
tblVehicleEF	MCY	6.6200e-004	5.9700e-004
tblVehicleEF	MCY	1.17	1.43
tblVehicleEF	MCY	0.66	0.79
tblVehicleEF	MCY	0.69	0.76
tblVehicleEF	MCY	3.06	2.61
tblVehicleEF	MCY	0.59	1.77
tblVehicleEF	MCY	2.22	2.00
tblVehicleEF	MCY	0.50	0.31
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	18.11	18.83
tblVehicleEF	MCY	8.87	7.90
tblVehicleEF	MCY	183.25	207.41
tblVehicleEF	MCY	44.44	58.44
tblVehicleEF	MCY	0.98	0.97
tblVehicleEF	MCY	2.3160e-003	1.7970e-003

tblVehicleEF	MCY	3.5910e-003	2.7750e-003
tblVehicleEF	MCY	2.1630e-003	1.6800e-003
tblVehicleEF	MCY	3.3760e-003	2.6090e-003
tblVehicleEF	MCY	1.97	2.75
tblVehicleEF	MCY	0.78	1.09
tblVehicleEF	MCY	1.23	1.72
tblVehicleEF	MCY	2.40	2.07
tblVehicleEF	MCY	0.56	1.74
tblVehicleEF	MCY	1.82	1.61
tblVehicleEF	MCY	2.2010e-003	2.0530e-003
tblVehicleEF	MCY	6.4300e-004	5.7800e-004
tblVehicleEF	MCY	1.97	2.75
tblVehicleEF	MCY	0.78	1.09
tblVehicleEF	MCY	1.23	1.72
tblVehicleEF	MCY	3.00	2.56
tblVehicleEF	MCY	0.56	1.74
tblVehicleEF	MCY	1.98	1.75
tblVehicleEF	MCY	0.51	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.59	18.30
tblVehicleEF	MCY	9.77	8.43
tblVehicleEF	MCY	183.25	206.64
tblVehicleEF	MCY	44.44	59.88
tblVehicleEF	MCY	1.10	1.09
tblVehicleEF	MCY	2.3160e-003	1.7970e-003
tblVehicleEF	MCY	3.5910e-003	2.7750e-003
tblVehicleEF	MCY	2.1630e-003	1.6800e-003

tblVehicleEF	MCY	3.3760e-003	2.6090e-003
tblVehicleEF	MCY	1.25	1.64
tblVehicleEF	MCY	0.85	1.05
tblVehicleEF	MCY	0.66	0.76
tblVehicleEF	MCY	2.46	2.09
tblVehicleEF	MCY	0.68	2.02
tblVehicleEF	MCY	2.07	1.79
tblVehicleEF	MCY	2.2110e-003	2.0450e-003
tblVehicleEF	MCY	6.6500e-004	5.9300e-004
tblVehicleEF	MCY	1.25	1.64
tblVehicleEF	MCY	0.85	1.05
tblVehicleEF	MCY	0.66	0.76
tblVehicleEF	MCY	3.07	2.59
tblVehicleEF	MCY	0.68	2.02
tblVehicleEF	MCY	2.25	1.95
tblVehicleEF	MDV	0.01	4.1640e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.17	0.92
tblVehicleEF	MDV	2.30	2.99
tblVehicleEF	MDV	483.05	396.16
tblVehicleEF	MDV	101.29	84.06
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	2.0950e-003	1.4100e-003
tblVehicleEF	MDV	2.4110e-003	1.8510e-003
tblVehicleEF	MDV	1.9310e-003	1.3010e-003
tblVehicleEF	MDV	2.2170e-003	1.7020e-003
tblVehicleEF	MDV	0.07	0.10

tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.09	0.46
tblVehicleEF	MDV	0.17	0.38
tblVehicleEF	MDV	4.8370e-003	3.8690e-003
tblVehicleEF	MDV	1.0530e-003	8.2200e-004
tblVehicleEF	MDV	0.07	0.10
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.09	0.46
tblVehicleEF	MDV	0.19	0.41
tblVehicleEF	MDV	0.01	4.6800e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.30	1.09
tblVehicleEF	MDV	1.97	2.49
tblVehicleEF	MDV	507.73	417.66
tblVehicleEF	MDV	101.29	83.09
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	2.0950e-003	1.4100e-003
tblVehicleEF	MDV	2.4110e-003	1.8510e-003
tblVehicleEF	MDV	1.9310e-003	1.3010e-003
tblVehicleEF	MDV	2.2170e-003	1.7020e-003
tblVehicleEF	MDV	0.12	0.19
tblVehicleEF	MDV	0.16	0.17
tblVehicleEF	MDV	0.11	0.17

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.09	0.45
tblVehicleEF	MDV	0.15	0.32
tblVehicleEF	MDV	5.0860e-003	4.0790e-003
tblVehicleEF	MDV	1.0470e-003	8.1200e-004
tblVehicleEF	MDV	0.12	0.19
tblVehicleEF	MDV	0.16	0.17
tblVehicleEF	MDV	0.11	0.17
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.09	0.45
tblVehicleEF	MDV	0.17	0.35
tblVehicleEF	MDV	0.01	4.0920e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.12	0.88
tblVehicleEF	MDV	2.36	2.97
tblVehicleEF	MDV	474.94	392.53
tblVehicleEF	MDV	101.29	84.03
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	2.0950e-003	1.4100e-003
tblVehicleEF	MDV	2.4110e-003	1.8510e-003
tblVehicleEF	MDV	1.9310e-003	1.3010e-003
tblVehicleEF	MDV	2.2170e-003	1.7020e-003
tblVehicleEF	MDV	0.07	0.10
tblVehicleEF	MDV	0.17	0.16
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.52

tblVehicleEF	MDV	0.18	0.38
tblVehicleEF	MDV	4.7550e-003	3.8330e-003
tblVehicleEF	MDV	1.0540e-003	8.2100e-004
tblVehicleEF	MDV	0.07	0.10
tblVehicleEF	MDV	0.17	0.16
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.11	0.52
tblVehicleEF	MDV	0.19	0.41
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	1.75	0.33
tblVehicleEF	MH	5.12	0.00
tblVehicleEF	MH	1,098.66	929.33
tblVehicleEF	MH	58.67	0.00
tblVehicleEF	MH	1.14	4.27
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.02	0.14
tblVehicleEF	MH	1.0060e-003	0.00
tblVehicleEF	MH	3.2200e-003	4.0000e-003
tblVehicleEF	MH	0.02	0.13
tblVehicleEF	MH	9.2500e-004	0.00
tblVehicleEF	MH	0.95	0.00
tblVehicleEF	MH	0.06	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00

tblVehicleEF	MH	0.30	0.00
tblVehicleEF	MH	0.01	8.7850e-003
tblVehicleEF	MH	6.7600e-004	0.00
tblVehicleEF	MH	0.95	0.00
tblVehicleEF	MH	0.06	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.32	0.00
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	1.79	0.33
tblVehicleEF	MH	4.82	0.00
tblVehicleEF	MH	1,098.66	929.33
tblVehicleEF	MH	58.67	0.00
tblVehicleEF	MH	1.05	4.03
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.02	0.14
tblVehicleEF	MH	1.0060e-003	0.00
tblVehicleEF	MH	3.2200e-003	4.0000e-003
tblVehicleEF	MH	0.02	0.13
tblVehicleEF	MH	9.2500e-004	0.00
tblVehicleEF	MH	1.47	0.00
tblVehicleEF	MH	0.07	0.00
tblVehicleEF	MH	0.60	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00

tblVehicleEF	MH	0.28	0.00
tblVehicleEF	MH	0.01	8.7850e-003
tblVehicleEF	MH	6.7100e-004	0.00
tblVehicleEF	MH	1.47	0.00
tblVehicleEF	MH	0.07	0.00
tblVehicleEF	MH	0.60	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.31	0.00
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	1.73	0.33
tblVehicleEF	MH	5.17	0.00
tblVehicleEF	MH	1,098.66	929.33
tblVehicleEF	MH	58.67	0.00
tblVehicleEF	MH	1.12	4.20
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.02	0.14
tblVehicleEF	MH	1.0060e-003	0.00
tblVehicleEF	MH	3.2200e-003	4.0000e-003
tblVehicleEF	MH	0.02	0.13
tblVehicleEF	MH	9.2500e-004	0.00
tblVehicleEF	MH	1.03	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00

tblVehicleEF	MH	0.30	0.00
tblVehicleEF	MH	0.01	8.7850e-003
tblVehicleEF	MH	6.7700e-004	0.00
tblVehicleEF	MH	1.03	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.33	0.00
tblVehicleEF	MHD	0.02	2.7550e-003
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tblVehicleEF	MHD	0.05	7.0300e-003
tblVehicleEF	MHD	0.34	0.33
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tblVehicleEF	MHD	1,125.72	911.02
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tblVehicleEF	MHD	0.37	0.40
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tblVehicleEF	MHD	2.8090e-003	9.4670e-003
tblVehicleEF	MHD	7.6600e-004	8.3000e-005
tblVehicleEF	MHD	9.7000e-005	4.1500e-004
tblVehicleEF	MHD	2.6840e-003	9.0550e-003
tblVehicleEF	MHD	7.0500e-004	7.6000e-005
tblVehicleEF	MHD	1.0820e-003	4.1800e-004

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tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	6.9100e-004	2.2800e-004
tblVehicleEF	MHD	0.03	9.5450e-003
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.33	0.04
tblVehicleEF	MHD	1.3310e-003	6.3800e-004
tblVehicleEF	MHD	0.01	8.6560e-003
tblVehicleEF	MHD	6.8600e-004	7.1000e-005
tblVehicleEF	MHD	1.0820e-003	4.1800e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.9100e-004	2.2800e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	0.01	2.6270e-003
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tblVehicleEF	MHD	0.04	6.7570e-003
tblVehicleEF	MHD	0.25	0.29
tblVehicleEF	MHD	0.28	0.12
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tblVehicleEF	MHD	1,125.72	911.02
tblVehicleEF	MHD	59.27	7.14
tblVehicleEF	MHD	0.38	0.39
tblVehicleEF	MHD	0.66	0.86

tblVehicleEF	MHD	8.6000e-005	3.6900e-004
tblVehicleEF	MHD	2.8090e-003	9.4670e-003
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tblVehicleEF	MHD	2.6840e-003	9.0550e-003
tblVehicleEF	MHD	7.0500e-004	7.6000e-005
tblVehicleEF	MHD	1.6890e-003	7.5100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	1.0300e-003	4.4600e-004
tblVehicleEF	MHD	0.03	9.6090e-003
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.31	0.04
tblVehicleEF	MHD	1.4080e-003	6.3800e-004
tblVehicleEF	MHD	0.01	8.6560e-003
tblVehicleEF	MHD	6.8100e-004	7.1000e-005
tblVehicleEF	MHD	1.6890e-003	7.5100e-004
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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.0300e-003	4.4600e-004
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tblVehicleEF	MHD	0.02	0.07
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tblVehicleEF	MHD	7.6600e-004	8.3000e-005
tblVehicleEF	MHD	1.1900e-004	5.0100e-004
tblVehicleEF	MHD	2.6840e-003	9.0550e-003
tblVehicleEF	MHD	7.0500e-004	7.6000e-005
tblVehicleEF	MHD	1.0540e-003	4.3600e-004
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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.6300e-004	2.3900e-004
tblVehicleEF	MHD	0.03	9.5510e-003
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.33	0.04
tblVehicleEF	MHD	1.2250e-003	6.3800e-004
tblVehicleEF	MHD	0.01	8.6560e-003
tblVehicleEF	MHD	6.8600e-004	7.1000e-005
tblVehicleEF	MHD	1.0540e-003	4.3600e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	6.6300e-004	2.3900e-004

tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.36	0.04
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tblVehicleEF	OBUS	6.0000e-003	5.4050e-003
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tblVehicleEF	OBUS	0.44	0.70
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tblVehicleEF	OBUS	68.36	21.28
tblVehicleEF	OBUS	0.19	0.23
tblVehicleEF	OBUS	0.63	0.91
tblVehicleEF	OBUS	1.8000e-005	7.5000e-005
tblVehicleEF	OBUS	2.5040e-003	8.4680e-003
tblVehicleEF	OBUS	8.5000e-004	2.1800e-004
tblVehicleEF	OBUS	1.7000e-005	7.2000e-005
tblVehicleEF	OBUS	2.3790e-003	8.0880e-003
tblVehicleEF	OBUS	7.8100e-004	2.0100e-004
tblVehicleEF	OBUS	1.5080e-003	2.6670e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	7.8700e-004	1.1770e-003
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.33	0.13

tblVehicleEF	OBUS	8.8900e-004	6.1500e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7500e-004	2.1100e-004
tblVehicleEF	OBUS	1.5080e-003	2.6670e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	7.8700e-004	1.1770e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	OBUS	0.01	8.5920e-003
tblVehicleEF	OBUS	6.1100e-003	5.5390e-003
tblVehicleEF	OBUS	0.02	0.02
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tblVehicleEF	OBUS	0.20	0.21
tblVehicleEF	OBUS	0.59	0.84
tblVehicleEF	OBUS	1.5000e-005	6.7000e-005
tblVehicleEF	OBUS	2.5040e-003	8.4680e-003
tblVehicleEF	OBUS	8.5000e-004	2.1800e-004
tblVehicleEF	OBUS	1.4000e-005	6.4000e-005
tblVehicleEF	OBUS	2.3790e-003	8.0880e-003
tblVehicleEF	OBUS	7.8100e-004	2.0100e-004

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tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.31	0.12
tblVehicleEF	OBUS	9.3200e-004	6.0900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7000e-004	2.0700e-004
tblVehicleEF	OBUS	2.2910e-003	4.6970e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	1.1730e-003	2.2650e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.34	0.13
tblVehicleEF	OBUS	0.01	8.4630e-003
tblVehicleEF	OBUS	5.9720e-003	5.4160e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.25	0.49
tblVehicleEF	OBUS	0.44	0.70
tblVehicleEF	OBUS	5.27	2.67
tblVehicleEF	OBUS	85.78	65.29
tblVehicleEF	OBUS	1,222.80	1,335.50
tblVehicleEF	OBUS	68.36	21.26
tblVehicleEF	OBUS	0.18	0.24

tblVehicleEF	OBUS	0.62	0.89
tblVehicleEF	OBUS	2.1000e-005	8.7000e-005
tblVehicleEF	OBUS	2.5040e-003	8.4680e-003
tblVehicleEF	OBUS	8.5000e-004	2.1800e-004
tblVehicleEF	OBUS	2.0000e-005	8.3000e-005
tblVehicleEF	OBUS	2.3790e-003	8.0880e-003
tblVehicleEF	OBUS	7.8100e-004	2.0100e-004
tblVehicleEF	OBUS	1.5020e-003	2.7830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	7.6600e-004	1.2510e-003
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.31
tblVehicleEF	OBUS	0.33	0.13
tblVehicleEF	OBUS	8.3000e-004	6.2400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7600e-004	2.1000e-004
tblVehicleEF	OBUS	1.5020e-003	2.7830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	7.6600e-004	1.2510e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.31
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	SBUS	0.83	0.09
tblVehicleEF	SBUS	0.01	6.6030e-003
tblVehicleEF	SBUS	0.06	8.0990e-003

tblVehicleEF	SBUS	8.04	3.43
tblVehicleEF	SBUS	0.70	0.55
tblVehicleEF	SBUS	7.18	1.08
tblVehicleEF	SBUS	1,118.19	369.74
tblVehicleEF	SBUS	1,082.51	1,096.55
tblVehicleEF	SBUS	55.02	6.92
tblVehicleEF	SBUS	8.69	3.32
tblVehicleEF	SBUS	3.91	4.42
tblVehicleEF	SBUS	8.2920e-003	3.3040e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.8500e-004	4.8000e-005
tblVehicleEF	SBUS	7.9330e-003	3.1610e-003
tblVehicleEF	SBUS	2.6760e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	7.2100e-004	4.4000e-005
tblVehicleEF	SBUS	3.6590e-003	1.5760e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	0.96	0.41
tblVehicleEF	SBUS	1.9290e-003	7.9200e-004
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.01	0.07
tblVehicleEF	SBUS	0.38	0.05
tblVehicleEF	SBUS	0.01	3.5360e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.7500e-004	6.9000e-005
tblVehicleEF	SBUS	3.6590e-003	1.5760e-003

tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.38	0.59
tblVehicleEF	SBUS	1.9290e-003	7.9200e-004
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.07
tblVehicleEF	SBUS	0.42	0.05
tblVehicleEF	SBUS	0.83	0.09
tblVehicleEF	SBUS	0.01	6.6870e-003
tblVehicleEF	SBUS	0.06	6.7520e-003
tblVehicleEF	SBUS	7.94	3.39
tblVehicleEF	SBUS	0.71	0.56
tblVehicleEF	SBUS	5.72	0.77
tblVehicleEF	SBUS	1,168.50	378.98
tblVehicleEF	SBUS	1,082.51	1,096.56
tblVehicleEF	SBUS	55.02	6.42
tblVehicleEF	SBUS	8.97	3.40
tblVehicleEF	SBUS	3.68	4.16
tblVehicleEF	SBUS	6.9900e-003	2.7930e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.8500e-004	4.8000e-005
tblVehicleEF	SBUS	6.6880e-003	2.6720e-003
tblVehicleEF	SBUS	2.6760e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	7.2100e-004	4.4000e-005
tblVehicleEF	SBUS	5.6810e-003	2.7600e-003
tblVehicleEF	SBUS	0.03	0.01

tblVehicleEF	SBUS	0.95	0.41
tblVehicleEF	SBUS	2.9530e-003	1.4670e-003
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.01	3.6240e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5000e-004	6.3000e-005
tblVehicleEF	SBUS	5.6810e-003	2.7600e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.38	0.59
tblVehicleEF	SBUS	2.9530e-003	1.4670e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.83	0.09
tblVehicleEF	SBUS	0.01	6.6020e-003
tblVehicleEF	SBUS	0.07	8.2440e-003
tblVehicleEF	SBUS	8.19	3.48
tblVehicleEF	SBUS	0.70	0.55
tblVehicleEF	SBUS	7.44	1.10
tblVehicleEF	SBUS	1,048.72	356.98
tblVehicleEF	SBUS	1,082.51	1,096.55
tblVehicleEF	SBUS	55.02	6.96
tblVehicleEF	SBUS	8.31	3.21
tblVehicleEF	SBUS	3.85	4.35
tblVehicleEF	SBUS	0.01	4.0110e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.8500e-004	4.8000e-005
tblVehicleEF	SBUS	9.6530e-003	3.8370e-003
tblVehicleEF	SBUS	2.6760e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	7.2100e-004	4.4000e-005
tblVehicleEF	SBUS	3.5200e-003	1.4840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	0.96	0.41
tblVehicleEF	SBUS	1.8620e-003	8.1800e-004
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.39	0.05
tblVehicleEF	SBUS	0.01	3.4160e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.7900e-004	6.9000e-005
tblVehicleEF	SBUS	3.5200e-003	1.4840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.39	0.59
tblVehicleEF	SBUS	1.8620e-003	8.1800e-004
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.43	0.05
tblVehicleEF	UBUS	2.20	3.04
tblVehicleEF	UBUS	0.06	0.02
tblVehicleEF	UBUS	9.91	23.60

tblVehicleEF	UBUS	10.15	1.86
tblVehicleEF	UBUS	1,905.83	1,635.62
tblVehicleEF	UBUS	113.27	22.96
tblVehicleEF	UBUS	7.78	0.30
tblVehicleEF	UBUS	0.58	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.10	2.1820e-003
tblVehicleEF	UBUS	1.2130e-003	2.2400e-004
tblVehicleEF	UBUS	0.25	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.09	2.0670e-003
tblVehicleEF	UBUS	1.1150e-003	2.0600e-004
tblVehicleEF	UBUS	5.0170e-003	2.8050e-003
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	2.8810e-003	1.1470e-003
tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	0.03	0.08
tblVehicleEF	UBUS	0.79	0.10
tblVehicleEF	UBUS	9.5330e-003	6.3200e-003
tblVehicleEF	UBUS	1.3160e-003	2.2700e-004
tblVehicleEF	UBUS	5.0170e-003	2.8050e-003
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	2.8810e-003	1.1470e-003
tblVehicleEF	UBUS	2.96	3.11
tblVehicleEF	UBUS	0.03	0.08
tblVehicleEF	UBUS	0.86	0.10
tblVehicleEF	UBUS	2.20	3.04

tblVehicleEF	UBUS	0.05	0.02
tblVehicleEF	UBUS	9.96	23.60
tblVehicleEF	UBUS	8.81	1.58
tblVehicleEF	UBUS	1,905.83	1,635.63
tblVehicleEF	UBUS	113.27	22.49
tblVehicleEF	UBUS	7.32	0.30
tblVehicleEF	UBUS	0.58	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.10	2.1820e-003
tblVehicleEF	UBUS	1.2130e-003	2.2400e-004
tblVehicleEF	UBUS	0.25	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.09	2.0670e-003
tblVehicleEF	UBUS	1.1150e-003	2.0600e-004
tblVehicleEF	UBUS	7.4730e-003	4.9810e-003
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	4.2880e-003	2.2660e-003
tblVehicleEF	UBUS	0.69	0.05
tblVehicleEF	UBUS	0.02	0.07
tblVehicleEF	UBUS	0.72	0.09
tblVehicleEF	UBUS	9.5340e-003	6.3200e-003
tblVehicleEF	UBUS	1.2930e-003	2.2300e-004
tblVehicleEF	UBUS	7.4730e-003	4.9810e-003
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	4.2880e-003	2.2660e-003
tblVehicleEF	UBUS	2.97	3.11
tblVehicleEF	UBUS	0.02	0.07

tblVehicleEF	UBUS	0.79	0.09
tblVehicleEF	UBUS	2.20	3.04
tblVehicleEF	UBUS	0.06	0.02
tblVehicleEF	UBUS	9.90	23.60
tblVehicleEF	UBUS	10.35	1.85
tblVehicleEF	UBUS	1,905.83	1,635.62
tblVehicleEF	UBUS	113.27	22.93
tblVehicleEF	UBUS	7.63	0.30
tblVehicleEF	UBUS	0.58	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.10	2.1820e-003
tblVehicleEF	UBUS	1.2130e-003	2.2400e-004
tblVehicleEF	UBUS	0.25	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.09	2.0670e-003
tblVehicleEF	UBUS	1.1150e-003	2.0600e-004
tblVehicleEF	UBUS	5.4520e-003	2.8430e-003
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	2.9590e-003	1.2010e-003
tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	0.80	0.09
tblVehicleEF	UBUS	9.5330e-003	6.3200e-003
tblVehicleEF	UBUS	1.3200e-003	2.2700e-004
tblVehicleEF	UBUS	5.4520e-003	2.8430e-003
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	2.9590e-003	1.2010e-003

tblVehicleEF	UBUS	2.96	3.11
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	0.88	0.10
tblVehicleTrips	ST_TR	9.91	9.83
tblVehicleTrips	SU_TR	8.62	8.54
tblVehicleTrips	WD_TR	9.52	9.44
tblWater	IndoorWaterUseRate	12,835,343.05	10,268,274.44
tblWater	OutdoorWaterUseRate	8,091,846.70	6,473,477.36
tblWoodstoves	NumberCatalytic	9.85	0.00
tblWoodstoves	NumberNoncatalytic	9.85	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.1902	49.0325	58.4624	0.1020	19.9862	2.4636	22.2725	10.1696	2.3371	12.2730	0.0000	9,862.5482	9,862.5482	1.9502	0.0000	9,907.1024
2023	43.2870	57.6999	77.1452	0.1333	1.2522	2.7719	4.0240	0.3351	2.6231	2.9582	0.0000	12,889.0371	12,889.0371	2.5187	0.0000	12,952.0034
Maximum	**43.2870**	**57.6999**	**77.1452**	**0.1333**	**19.9862**	**2.7719**	**22.2725**	**10.1696**	**2.6231**	**12.2730**	**0.0000**	**12,889.0371**	**12,889.0371**	**2.5187**	**0.0000**	**12,952.0034**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.1902	49.0325	58.4624	0.1020	7.8369	2.4636	10.1232	3.9790	2.3371	6.0824	0.0000	9,862.5482	9,862.5482	1.9502	0.0000	9,907.1024
2023	43.2870	57.6999	77.1452	0.1333	0.7611	2.7719	3.5330	0.2146	2.6231	2.8377	0.0000	12,889.0371	12,889.0371	2.5187	0.0000	12,952.0034
Maximum	**43.2870**	**57.6999**	**77.1452**	**0.1333**	**7.8369**	**2.7719**	**10.1232**	**3.9790**	**2.6231**	**6.0824**	**0.0000**	**12,889.0371**	**12,889.0371**	**2.5187**	**0.0000**	**12,952.0034**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.52**	**0.00**	**48.07**	**60.08**	**0.00**	**41.44**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.5011	3.4553	17.6470	0.0217		0.3542	0.3542		0.3542	0.3542	0.0000	4,201.0295	4,201.0295	0.1081	0.0765	4,226.5238
Energy	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
Mobile	4.5780	11.4437	43.6091	0.1437	14.0008	0.1096	14.1104	3.7348	0.1028	3.8375		14,829.0919	14,829.0919	0.4088		14,839.3114
Total	**13.1815**	**15.7732**	**61.6280**	**0.1710**	**14.0008**	**0.5344**	**14.5353**	**3.7348**	**0.5276**	**4.2624**	**0.0000**	**20,146.1535**	**20,146.1535**	**0.5383**	**0.0969**	**20,188.4993**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.5011	3.4553	17.6470	0.0217		0.3542	0.3542		0.3542	0.3542	0.0000	4,201.0295	4,201.0295	0.1081	0.0765	4,226.5238
Energy	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
Mobile	4.5780	11.4437	43.6091	0.1437	14.0008	0.1096	14.1104	3.7348	0.1028	3.8375		14,829.0919	14,829.0919	0.4088		14,839.3114
Total	**13.1815**	**15.7732**	**61.6280**	**0.1710**	**14.0008**	**0.5344**	**14.5353**	**3.7348**	**0.5276**	**4.2624**	**0.0000**	**20,146.1535**	**20,146.1535**	**0.5383**	**0.0969**	**20,188.4993**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2022	6/10/2022	5	30	
2	Grading	Grading	6/11/2022	9/23/2022	5	75	
3	Building Construction	Building Construction	9/24/2022	6/30/2023	5	200	
4	Architectural Coating	Architectural Coating	4/10/2023	6/30/2023	5	60	
5	Paving	Paving	4/17/2023	6/30/2023	5	55	

Acres of Grading (Site Preparation Phase): 48.62

Acres of Grading (Grading Phase): 48.62

Acres of Paving: 0

Residential Indoor: 718,065; Residential Outdoor: 239,355; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Crawler Tractors	2	8.00	97	0.37
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
Building Construction	Aerial Lifts	1	8.00	46	0.45
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	7	8.00	89	0.20
Building Construction	Generator Sets	6	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	10	8.00	97	0.37
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	7.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	25	71.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	14.00	0.00	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

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.7850	0.0000	19.7850	10.1163	0.0000	10.1163			0.0000			0.0000
Off-Road	4.0309	39.2966	20.6839	0.0380		2.2849	2.2849		2.1021	2.1021		3,686.3768	3,686.3768	1.1923		3,716.1830
Total	**4.0309**	**39.2966**	**20.6839**	**0.0380**	**19.7850**	**2.2849**	**22.0699**	**10.1163**	**2.1021**	**12.2184**		**3,686.3768**	**3,686.3768**	**1.1923**		**3,716.1830**

3.2 Site Preparation - 2022

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
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
Worker	0.0713	0.0445	0.6270	1.9300e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		192.1903	192.1903	4.8400e-003		192.3114
Total	**0.0713**	**0.0445**	**0.6270**	**1.9300e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**192.1903**	**192.1903**	**4.8400e-003**		**192.3114**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7161	0.0000	7.7161	3.9453	0.0000	3.9453			0.0000			0.0000
Off-Road	4.0309	39.2966	20.6839	0.0380		2.2849	2.2849		2.1021	2.1021	0.0000	3,686.3768	3,686.3768	1.1923		3,716.1830
Total	**4.0309**	**39.2966**	**20.6839**	**0.0380**	**7.7161**	**2.2849**	**10.0010**	**3.9453**	**2.1021**	**6.0474**	**0.0000**	**3,686.3768**	**3,686.3768**	**1.1923**		**3,716.1830**

3.2 Site Preparation - 2022

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
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
Worker	0.0713	0.0445	0.6270	1.9300e-003	0.1207	1.4400e-003	0.1222	0.0336	1.3200e-003	0.0349		192.1903	192.1903	4.8400e-003		192.3114
Total	**0.0713**	**0.0445**	**0.6270**	**1.9300e-003**	**0.1207**	**1.4400e-003**	**0.1222**	**0.0336**	**1.3200e-003**	**0.0349**		**192.1903**	**192.1903**	**4.8400e-003**		**192.3114**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7097	0.0000	6.7097	3.3845	0.0000	3.3845			0.0000			0.0000
Off-Road	4.0552	41.9500	29.5346	0.0621		1.9710	1.9710		1.8134	1.8134		6,011.5680	6,011.5680	1.9443		6,060.1746
Total	**4.0552**	**41.9500**	**29.5346**	**0.0621**	**6.7097**	**1.9710**	**8.6807**	**3.3845**	**1.8134**	**5.1978**		**6,011.5680**	**6,011.5680**	**1.9443**		**6,060.1746**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.4000e-004	0.0218	4.9400e-003	7.0000e-005	1.6300e-003	6.0000e-005	1.6900e-003	4.5000e-004	6.0000e-005	5.1000e-004		7.6511	7.6511	5.1000e-004		7.6637
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
Worker	0.0792	0.0495	0.6967	2.1400e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		213.5448	213.5448	5.3800e-003		213.6794
Total	**0.0798**	**0.0713**	**0.7017**	**2.2100e-003**	**0.2252**	**1.6600e-003**	**0.2268**	**0.0597**	**1.5300e-003**	**0.0613**		**221.1958**	**221.1958**	**5.8900e-003**		**221.3431**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6168	0.0000	2.6168	1.3199	0.0000	1.3199			0.0000			0.0000
Off-Road	4.0552	41.9500	29.5346	0.0621		1.9710	1.9710		1.8134	1.8134	0.0000	6,011.5680	6,011.5680	1.9443		6,060.1746
Total	**4.0552**	**41.9500**	**29.5346**	**0.0621**	**2.6168**	**1.9710**	**4.5878**	**1.3199**	**1.8134**	**3.1333**	**0.0000**	**6,011.5680**	**6,011.5680**	**1.9443**		**6,060.1746**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.4000e-004	0.0218	4.9400e-003	7.0000e-005	1.0600e-003	6.0000e-005	1.1300e-003	3.1000e-004	6.0000e-005	3.7000e-004		7.6511	7.6511	5.1000e-004		7.6637
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
Worker	0.0792	0.0495	0.6967	2.1400e-003	0.1342	1.6000e-003	0.1358	0.0373	1.4700e-003	0.0388		213.5448	213.5448	5.3800e-003		213.6794
Total	**0.0798**	**0.0713**	**0.7017**	**2.2100e-003**	**0.1352**	**1.6600e-003**	**0.1369**	**0.0377**	**1.5300e-003**	**0.0392**		**221.1958**	**221.1958**	**5.8900e-003**		**221.3431**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.8543	46.9557	55.5399	0.0890		2.4544	2.4544		2.3286	2.3286		8,537.3401	8,537.3401	1.7297		8,580.5836
Total	**4.8543**	**46.9557**	**55.5399**	**0.0890**		**2.4544**	**2.4544**		**2.3286**	**2.3286**		**8,537.3401**	**8,537.3401**	**1.7297**		**8,580.5836**

3.4 Building Construction - 2022

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
Vendor	0.0548	1.9012	0.4492	5.3100e-003	0.1344	3.4900e-003	0.1379	0.0387	3.3400e-003	0.0420		567.1242	567.1242	0.0333		567.9571
Worker	0.2811	0.1756	2.4733	7.6100e-003	0.7936	5.6700e-003	0.7993	0.2105	5.2300e-003	0.2157		758.0840	758.0840	0.0191		758.5617
Total	**0.3359**	**2.0768**	**2.9225**	**0.0129**	**0.9280**	**9.1600e-003**	**0.9372**	**0.2492**	**8.5700e-003**	**0.2577**		**1,325.2082**	**1,325.2082**	**0.0524**		**1,326.5188**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.8543	46.9557	55.5399	0.0890		2.4544	2.4544		2.3286	2.3286	0.0000	8,537.3401	8,537.3401	1.7297		8,580.5836
Total	**4.8543**	**46.9557**	**55.5399**	**0.0890**		**2.4544**	**2.4544**		**2.3286**	**2.3286**	**0.0000**	**8,537.3401**	**8,537.3401**	**1.7297**		**8,580.5836**

3.4 Building Construction - 2022

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
Vendor	0.0548	1.9012	0.4492	5.3100e-003	0.0903	3.4900e-003	0.0938	0.0279	3.3400e-003	0.0312		567.1242	567.1242	0.0333		567.9571
Worker	0.2811	0.1756	2.4733	7.6100e-003	0.4762	5.6700e-003	0.4819	0.1326	5.2300e-003	0.1378		758.0840	758.0840	0.0191		758.5617
Total	**0.3359**	**2.0768**	**2.9225**	**0.0129**	**0.5666**	**9.1600e-003**	**0.5757**	**0.1605**	**8.5700e-003**	**0.1690**		**1,325.2082**	**1,325.2082**	**0.0524**		**1,326.5188**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.4774	43.2412	55.3171	0.0891		2.1106	2.1106		2.0034	2.0034		8,540.7044	8,540.7044	1.7177		8,583.6463
Total	**4.4774**	**43.2412**	**55.3171**	**0.0891**		**2.1106**	**2.1106**		**2.0034**	**2.0034**		**8,540.7044**	**8,540.7044**	**1.7177**		**8,583.6463**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0409	1.4373	0.4047	5.1400e-003	0.1344	1.6200e-003	0.1360	0.0387	1.5400e-003	0.0402		549.9222	549.9222	0.0291		550.6485
Worker	0.2643	0.1589	2.2840	7.3200e-003	0.7936	5.5300e-003	0.7991	0.2105	5.0900e-003	0.2156		729.8304	729.8304	0.0172		730.2613
Total	**0.3052**	**1.5962**	**2.6888**	**0.0125**	**0.9280**	**7.1500e-003**	**0.9352**	**0.2492**	**6.6300e-003**	**0.2558**		**1,279.7526**	**1,279.7526**	**0.0463**		**1,280.9098**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.4774	43.2412	55.3171	0.0891		2.1106	2.1106		2.0034	2.0034	0.0000	8,540.7044	8,540.7044	1.7177		8,583.6462
Total	**4.4774**	**43.2412**	**55.3171**	**0.0891**		**2.1106**	**2.1106**		**2.0034**	**2.0034**	**0.0000**	**8,540.7044**	**8,540.7044**	**1.7177**		**8,583.6462**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0409	1.4373	0.4047	5.1400e-003	0.0903	1.6200e-003	0.0920	0.0279	1.5400e-003	0.0294		549.9222	549.9222	0.0291		550.6485
Worker	0.2643	0.1589	2.2840	7.3200e-003	0.4762	5.5300e-003	0.4818	0.1326	5.0900e-003	0.1377		729.8304	729.8304	0.0172		730.2613
Total	**0.3052**	**1.5962**	**2.6888**	**0.0125**	**0.5666**	**7.1500e-003**	**0.5737**	**0.1605**	**6.6300e-003**	**0.1671**		**1,279.7526**	**1,279.7526**	**0.0463**		**1,280.9098**

3.5 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.9804					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3833	2.6060	3.6222	5.9400e-003		0.1416	0.1416		0.1416	0.1416		562.8961	562.8961	0.0337		563.7380
Total	**37.3637**	**2.6060**	**3.6222**	**5.9400e-003**		**0.1416**	**0.1416**		**0.1416**	**0.1416**		**562.8961**	**562.8961**	**0.0337**		**563.7380**

3.5 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0521	0.0313	0.4504	1.4400e-003	0.1565	1.0900e-003	0.1576	0.0415	1.0000e-003	0.0425		143.9102	143.9102	3.4000e-003		143.9952
Total	**0.0521**	**0.0313**	**0.4504**	**1.4400e-003**	**0.1565**	**1.0900e-003**	**0.1576**	**0.0415**	**1.0000e-003**	**0.0425**		**143.9102**	**143.9102**	**3.4000e-003**		**143.9952**

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	36.9804					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3833	2.6060	3.6222	5.9400e-003		0.1416	0.1416		0.1416	0.1416	0.0000	562.8961	562.8961	0.0337		563.7380
Total	**37.3637**	**2.6060**	**3.6222**	**5.9400e-003**		**0.1416**	**0.1416**		**0.1416**	**0.1416**	**0.0000**	**562.8961**	**562.8961**	**0.0337**		**563.7380**

3.5 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0521	0.0313	0.4504	1.4400e-003	0.0939	1.0900e-003	0.0950	0.0261	1.0000e-003	0.0271		143.9102	143.9102	3.4000e-003		143.9952
Total	**0.0521**	**0.0313**	**0.4504**	**1.4400e-003**	**0.0939**	**1.0900e-003**	**0.0950**	**0.0261**	**1.0000e-003**	**0.0271**		**143.9102**	**143.9102**	**3.4000e-003**		**143.9952**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0558	0.0336	0.4825	1.5500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		154.1895	154.1895	3.6400e-003		154.2806
Total	**0.0558**	**0.0336**	**0.4825**	**1.5500e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**154.1895**	**154.1895**	**3.6400e-003**		**154.2806**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0558	0.0336	0.4825	1.5500e-003	0.1006	1.1700e-003	0.1018	0.0280	1.0800e-003	0.0291		154.1895	154.1895	3.6400e-003		154.2806
Total	**0.0558**	**0.0336**	**0.4825**	**1.5500e-003**	**0.1006**	**1.1700e-003**	**0.1018**	**0.0280**	**1.0800e-003**	**0.0291**		**154.1895**	**154.1895**	**3.6400e-003**		**154.2806**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.5780	11.4437	43.6091	0.1437	14.0008	0.1096	14.1104	3.7348	0.1028	3.8375		14,829.0919	14,829.0919	0.4088		14,839.3114
Unmitigated	4.5780	11.4437	43.6091	0.1437	14.0008	0.1096	14.1104	3.7348	0.1028	3.8375		14,829.0919	14,829.0919	0.4088		14,839.3114

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,859.68	1,936.51	1682.38	6,305,763	6,305,763
Total	1,859.68	1,936.51	1,682.38	6,305,763	6,305,763

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.553184	0.042828	0.203573	0.117591	0.015120	0.005857	0.021819	0.035126	0.000000	0.000000	0.004903	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/day										lb/day					
NaturalGas Mitigated	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
NaturalGas Unmitigated	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	9486.27	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
Total		**0.1023**	**0.8742**	**0.3720**	**5.5800e-003**		**0.0707**	**0.0707**		**0.0707**	**0.0707**		**1,116.0322**	**1,116.0322**	**0.0214**	**0.0205**	**1,122.6642**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	9.48627	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
Total		**0.1023**	**0.8742**	**0.3720**	**5.5800e-003**		**0.0707**	**0.0707**		**0.0707**	**0.0707**		**1,116.0322**	**1,116.0322**	**0.0214**	**0.0205**	**1,122.6642**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.5011	3.4553	17.6470	0.0217		0.3542	0.3542		0.3542	0.3542	0.0000	4,201.0295	4,201.0295	0.1081	0.0765	4,226.5238
Unmitigated	8.5011	3.4553	17.6470	0.0217		0.3542	0.3542		0.3542	0.3542	0.0000	4,201.0295	4,201.0295	0.1081	0.0765	4,226.5238

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6079					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3824	3.2679	1.3906	0.0209		0.2642	0.2642		0.2642	0.2642	0.0000	4,171.7647	4,171.7647	0.0800	0.0765	4,196.5554
Landscaping	0.4898	0.1874	16.2564	8.6000e-004		0.0900	0.0900		0.0900	0.0900		29.2648	29.2648	0.0281		29.9683
Total	**8.5011**	**3.4553**	**17.6470**	**0.0217**		**0.3542**	**0.3542**		**0.3542**	**0.3542**	**0.0000**	**4,201.0295**	**4,201.0295**	**0.1081**	**0.0765**	**4,226.5238**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6079					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3824	3.2679	1.3906	0.0209		0.2642	0.2642		0.2642	0.2642	0.0000	4,171.7647	4,171.7647	0.0800	0.0765	4,196.5554
Landscaping	0.4898	0.1874	16.2564	8.6000e-004		0.0900	0.0900		0.0900	0.0900		29.2648	29.2648	0.0281		29.9683
Total	**8.5011**	**3.4553**	**17.6470**	**0.0217**		**0.3542**	**0.3542**		**0.3542**	**0.3542**	**0.0000**	**4,201.0295**	**4,201.0295**	**0.1081**	**0.0765**	**4,226.5238**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Stratford Ranch Residential - TTM 38071

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	197.00	Dwelling Unit	48.62	354,600.00	563

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	518.69	**CH4 Intensity (lb/MWhr)**	0.021	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Stratford Ranch Residential - TTM 38071 - South Coast AQMD Air District, Winter

Project Characteristics - SEC will have 41.33% renewalbles in 2023 = CO2: 518.69, CH4: 0.0214, and N20; 0.0046 lbs/MWh

Land Use - Based on Porject plan 2/24/21

Construction Phase - Buidling construction revised based to meet a mid 2023 opening year, paving and arichitectural coating overlapped with building construction to represent a reasonable worst case condition

Off-road Equipment - standard 8 hour day, double equipment

Off-road Equipment - No welders, replaced with genset, tractor increase eqquipment to account for shortened building schedule, standard 8-hour schedule

Off-road Equipment - Tractor/loader/backhoe replaced with crawler tractor for PM generation, crawler HP and load factor adjusted to represent Tractor/Loaders/Backhoes

Off-road Equipment - No Change

Off-road Equipment - Tractor/loader/backhoe replaced with crawler tractor for PM generation, crawler HP and load factor adjusted to represent Tractor/Loaders/Backhoes

Grading - The entire site that would be graded and is 48.62 acres, only 53 CY will be exported, project site plan

Architectural Coating -

Vehicle Trips - Based on TIA

Vehicle Emission Factors - EMFAC2017 with Adjustment Factors for Safe Rule

Vehicle Emission Factors - EMFAC2017 with Adjustment Factors for Safe Rule

Vehicle Emission Factors - EMFAC2017 with Adjustment Factors for Safe Rule

Woodstoves - SACQMD Rule 445 No Wood Burning FP below 3,000' AMSL

Energy Use - Accounts for 53% increase in efficency over 2016 building code.

Water And Wastewater - Accounts for 2019 Greenbuilding code and MWELO

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 requires watering of site 3x daily, porject will be required to install trackout, reduction taken from Rule 403 mitigation tables during site prep and grading

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblConstructionPhase	NumDays	740.00	200.00
tblConstructionPhase	NumDays	55.00	60.00
tblEnergyUse	LightingElect	1,608.84	756.15
tblEnergyUse	T24E	951.67	447.28

tblEnergyUse	T24NG	24,566.15	11,546.09
tblFireplaces	NumberGas	167.45	197.00
tblFireplaces	NumberNoFireplace	19.70	0.00
tblFireplaces	NumberWood	9.85	0.00
tblFleetMix	HHD	0.03	0.04
tblFleetMix	LDA	0.55	0.55
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.20	0.20
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.8250e-003	5.8570e-003
tblFleetMix	MCY	4.8760e-003	4.9030e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	8.6800e-004	0.00
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	2.1230e-003	0.00
tblFleetMix	SBUS	7.1000e-004	0.00
tblFleetMix	UBUS	1.7800e-003	0.00
tblGrading	AcresOfGrading	262.50	48.62
tblGrading	AcresOfGrading	60.00	48.62
tblGrading	MaterialExported	0.00	53.00
tblLandUse	LotAcreage	63.96	48.62
tblOffRoadEquipment	HorsePower	212.00	97.00
tblOffRoadEquipment	HorsePower	212.00	97.00
tblOffRoadEquipment	HorsePower	63.00	46.00
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.45

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	10.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.021
tblProjectCharacteristics	CO2IntensityFactor	702.44	518.69
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
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tblVehicleEF	HHD	8.6120e-003	2.2630e-003
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8170e-003	8.8060e-003
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tblVehicleEF	HHD	7.3000e-005	0.00
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tblVehicleEF	HHD	0.08	0.02
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tblVehicleEF	HHD	3.9810e-003	9.7000e-005
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tblVehicleEF	HHD	7.0000e-005	2.0000e-006
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tblVehicleEF	HHD	1,529.62	1,272.83
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tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.9470e-003	0.02
tblVehicleEF	HHD	7.9000e-005	0.00
tblVehicleEF	HHD	7.2610e-003	1.9880e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8170e-003	8.8060e-003
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tblVehicleEF	HHD	7.3000e-005	0.00
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tblVehicleEF	HHD	1.5700e-004	5.0000e-006
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tblVehicleEF	HHD	0.01	2.7000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.9470e-003	0.02
tblVehicleEF	HHD	7.9000e-005	0.00
tblVehicleEF	HHD	0.01	2.5830e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8170e-003	8.7520e-003
tblVehicleEF	HHD	5.6890e-003	0.02
tblVehicleEF	HHD	7.3000e-005	0.00
tblVehicleEF	HHD	9.1000e-005	3.0000e-006
tblVehicleEF	HHD	4.2250e-003	1.0800e-004

tblVehicleEF	HHD	0.46	0.40
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tblVehicleEF	HHD	0.08	0.02
tblVehicleEF	HHD	3.4100e-004	4.7200e-004
tblVehicleEF	HHD	0.07	1.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.4000e-004	0.00
tblVehicleEF	HHD	9.1000e-005	3.0000e-006
tblVehicleEF	HHD	4.2250e-003	1.0800e-004
tblVehicleEF	HHD	0.54	0.46
tblVehicleEF	HHD	6.7000e-005	2.0000e-006
tblVehicleEF	HHD	0.17	0.02
tblVehicleEF	HHD	3.4100e-004	4.7200e-004
tblVehicleEF	HHD	0.07	1.0000e-006
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tblVehicleEF	LDA	0.57	0.56
tblVehicleEF	LDA	1.00	2.03
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tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	1.9480e-003	1.3050e-003
tblVehicleEF	LDA	2.2420e-003	1.7590e-003
tblVehicleEF	LDA	1.7950e-003	1.2020e-003
tblVehicleEF	LDA	2.0620e-003	1.6170e-003
tblVehicleEF	LDA	0.04	0.05

tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	6.9510e-003
tblVehicleEF	LDA	0.04	0.19
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.5360e-003	2.4590e-003
tblVehicleEF	LDA	5.6300e-004	5.1100e-004
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.04	0.19
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	4.5690e-003	2.1290e-003
tblVehicleEF	LDA	3.9690e-003	0.04
tblVehicleEF	LDA	0.64	0.67
tblVehicleEF	LDA	0.86	1.70
tblVehicleEF	LDA	266.82	272.11
tblVehicleEF	LDA	54.67	51.65
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	1.9480e-003	1.3050e-003
tblVehicleEF	LDA	2.2420e-003	1.7590e-003
tblVehicleEF	LDA	1.7950e-003	1.2020e-003
tblVehicleEF	LDA	2.0620e-003	1.6170e-003
tblVehicleEF	LDA	0.06	0.09
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.05	0.07

tblVehicleEF	LDA	0.01	7.7540e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.05	0.16
tblVehicleEF	LDA	2.6730e-003	2.6590e-003
tblVehicleEF	LDA	5.6100e-004	5.0500e-004
tblVehicleEF	LDA	0.06	0.09
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.06	0.18
tblVehicleEF	LDA	4.1700e-003	1.8550e-003
tblVehicleEF	LDA	4.5790e-003	0.04
tblVehicleEF	LDA	0.55	0.54
tblVehicleEF	LDA	1.03	2.01
tblVehicleEF	LDA	248.85	248.26
tblVehicleEF	LDA	54.67	52.24
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	1.9480e-003	1.3050e-003
tblVehicleEF	LDA	2.2420e-003	1.7590e-003
tblVehicleEF	LDA	1.7950e-003	1.2020e-003
tblVehicleEF	LDA	2.0620e-003	1.6170e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	6.8280e-003
tblVehicleEF	LDA	0.04	0.22

tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.4920e-003	2.4260e-003
tblVehicleEF	LDA	5.6400e-004	5.1000e-004
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	9.9310e-003
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDT1	0.01	5.7490e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.36	1.22
tblVehicleEF	LDT1	2.49	2.28
tblVehicleEF	LDT1	319.06	298.87
tblVehicleEF	LDT1	67.76	63.71
tblVehicleEF	LDT1	0.13	0.10
tblVehicleEF	LDT1	2.9770e-003	1.8930e-003
tblVehicleEF	LDT1	3.2520e-003	2.5560e-003
tblVehicleEF	LDT1	2.7410e-003	1.7420e-003
tblVehicleEF	LDT1	2.9900e-003	2.3500e-003
tblVehicleEF	LDT1	0.13	0.16
tblVehicleEF	LDT1	0.25	0.22
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.16	0.73
tblVehicleEF	LDT1	0.17	0.37
tblVehicleEF	LDT1	3.2070e-003	2.9210e-003

tblVehicleEF	LDT1	7.2100e-004	6.2300e-004
tblVehicleEF	LDT1	0.13	0.16
tblVehicleEF	LDT1	0.25	0.23
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.16	0.74
tblVehicleEF	LDT1	0.19	0.40
tblVehicleEF	LDT1	0.01	6.4140e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.50	1.44
tblVehicleEF	LDT1	2.12	1.91
tblVehicleEF	LDT1	334.98	320.06
tblVehicleEF	LDT1	67.76	62.93
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	2.9770e-003	1.8930e-003
tblVehicleEF	LDT1	3.2520e-003	2.5560e-003
tblVehicleEF	LDT1	2.7410e-003	1.7420e-003
tblVehicleEF	LDT1	2.9900e-003	2.3500e-003
tblVehicleEF	LDT1	0.21	0.30
tblVehicleEF	LDT1	0.27	0.26
tblVehicleEF	LDT1	0.15	0.22
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.15	0.72
tblVehicleEF	LDT1	0.15	0.31
tblVehicleEF	LDT1	3.3680e-003	3.1280e-003
tblVehicleEF	LDT1	7.1500e-004	6.1500e-004
tblVehicleEF	LDT1	0.21	0.30

tblVehicleEF	LDT1	0.27	0.26
tblVehicleEF	LDT1	0.15	0.22
tblVehicleEF	LDT1	0.05	0.04
tblVehicleEF	LDT1	0.15	0.72
tblVehicleEF	LDT1	0.16	0.34
tblVehicleEF	LDT1	0.01	5.6560e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.31	1.18
tblVehicleEF	LDT1	2.56	2.26
tblVehicleEF	LDT1	313.74	295.29
tblVehicleEF	LDT1	67.76	63.68
tblVehicleEF	LDT1	0.12	0.10
tblVehicleEF	LDT1	2.9770e-003	1.8930e-003
tblVehicleEF	LDT1	3.2520e-003	2.5560e-003
tblVehicleEF	LDT1	2.7410e-003	1.7420e-003
tblVehicleEF	LDT1	2.9900e-003	2.3500e-003
tblVehicleEF	LDT1	0.12	0.16
tblVehicleEF	LDT1	0.28	0.26
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.19	0.86
tblVehicleEF	LDT1	0.17	0.36
tblVehicleEF	LDT1	3.1530e-003	2.8860e-003
tblVehicleEF	LDT1	7.2200e-004	6.2200e-004
tblVehicleEF	LDT1	0.12	0.16
tblVehicleEF	LDT1	0.28	0.26
tblVehicleEF	LDT1	0.10	0.11

tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.19	0.86
tblVehicleEF	LDT1	0.19	0.40
tblVehicleEF	LDT2	5.9480e-003	3.1840e-003
tblVehicleEF	LDT2	5.6730e-003	0.06
tblVehicleEF	LDT2	0.75	0.79
tblVehicleEF	LDT2	1.24	2.59
tblVehicleEF	LDT2	356.06	314.22
tblVehicleEF	LDT2	75.77	67.26
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	1.9880e-003	1.3480e-003
tblVehicleEF	LDT2	2.3560e-003	1.7950e-003
tblVehicleEF	LDT2	1.8280e-003	1.2410e-003
tblVehicleEF	LDT2	2.1660e-003	1.6510e-003
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.5660e-003	3.0700e-003
tblVehicleEF	LDT2	7.7800e-004	6.5700e-004
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39

tblVehicleEF	LDT2	0.08	0.31
tblVehicleEF	LDT2	6.3690e-003	3.5750e-003
tblVehicleEF	LDT2	5.0330e-003	0.05
tblVehicleEF	LDT2	0.83	0.94
tblVehicleEF	LDT2	1.06	2.16
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tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	1.9880e-003	1.3480e-003
tblVehicleEF	LDT2	2.3560e-003	1.7950e-003
tblVehicleEF	LDT2	1.8280e-003	1.2410e-003
tblVehicleEF	LDT2	2.1660e-003	1.6510e-003
tblVehicleEF	LDT2	0.07	0.15
tblVehicleEF	LDT2	0.10	0.14
tblVehicleEF	LDT2	0.07	0.13
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.24
tblVehicleEF	LDT2	3.7510e-003	3.2670e-003
tblVehicleEF	LDT2	7.7500e-004	6.4900e-004
tblVehicleEF	LDT2	0.07	0.15
tblVehicleEF	LDT2	0.10	0.14
tblVehicleEF	LDT2	0.07	0.13
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.27
tblVehicleEF	LDT2	5.8200e-003	3.1320e-003

tblVehicleEF	LDT2	5.8050e-003	0.06
tblVehicleEF	LDT2	0.72	0.76
tblVehicleEF	LDT2	1.27	2.57
tblVehicleEF	LDT2	349.95	310.81
tblVehicleEF	LDT2	75.77	67.23
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	1.9880e-003	1.3480e-003
tblVehicleEF	LDT2	2.3560e-003	1.7950e-003
tblVehicleEF	LDT2	1.8280e-003	1.2410e-003
tblVehicleEF	LDT2	2.1660e-003	1.6510e-003
tblVehicleEF	LDT2	0.04	0.08
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.5050e-003	3.0370e-003
tblVehicleEF	LDT2	7.7900e-004	6.5700e-004
tblVehicleEF	LDT2	0.04	0.08
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LHD1	5.2150e-003	4.5410e-003
tblVehicleEF	LHD1	9.8020e-003	4.4200e-003
tblVehicleEF	LHD1	0.02	0.01

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.74	0.60
tblVehicleEF	LHD1	2.42	0.89
tblVehicleEF	LHD1	9.02	9.36
tblVehicleEF	LHD1	594.74	619.96
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tblVehicleEF	LHD1	0.07	0.08
tblVehicleEF	LHD1	1.09	1.39
tblVehicleEF	LHD1	8.6400e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.8040e-003	0.01
tblVehicleEF	LHD1	8.9300e-004	2.1100e-004
tblVehicleEF	LHD1	8.2600e-004	9.6900e-004
tblVehicleEF	LHD1	2.5390e-003	2.5170e-003
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tblVehicleEF	LHD1	8.2100e-004	1.9400e-004
tblVehicleEF	LHD1	3.0350e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8020e-003	1.2620e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.30	0.44
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	5.8330e-003	6.0260e-003
tblVehicleEF	LHD1	3.6000e-004	9.9000e-005
tblVehicleEF	LHD1	3.0350e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8020e-003	1.2620e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.30	0.44
tblVehicleEF	LHD1	0.26	0.07
tblVehicleEF	LHD1	5.2150e-003	4.5540e-003
tblVehicleEF	LHD1	0.01	4.4900e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.75	0.61
tblVehicleEF	LHD1	2.30	0.84
tblVehicleEF	LHD1	9.02	9.36
tblVehicleEF	LHD1	594.74	619.98
tblVehicleEF	LHD1	31.51	9.91
tblVehicleEF	LHD1	0.07	0.08
tblVehicleEF	LHD1	1.02	1.31
tblVehicleEF	LHD1	8.6400e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.8040e-003	0.01
tblVehicleEF	LHD1	8.9300e-004	2.1100e-004
tblVehicleEF	LHD1	8.2600e-004	9.6900e-004
tblVehicleEF	LHD1	2.5390e-003	2.5170e-003
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tblVehicleEF	LHD1	8.2100e-004	1.9400e-004
tblVehicleEF	LHD1	4.7330e-003	4.2440e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	2.7000e-003	2.4050e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.29	0.44
tblVehicleEF	LHD1	0.23	0.06
tblVehicleEF	LHD1	5.8330e-003	6.0260e-003
tblVehicleEF	LHD1	3.5800e-004	9.8000e-005
tblVehicleEF	LHD1	4.7330e-003	4.2440e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.7000e-003	2.4050e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.29	0.44
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	5.2150e-003	4.5430e-003
tblVehicleEF	LHD1	9.7560e-003	4.4280e-003
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tblVehicleEF	LHD1	0.15	0.17
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tblVehicleEF	LHD1	9.02	9.36
tblVehicleEF	LHD1	594.74	619.96
tblVehicleEF	LHD1	31.51	9.98
tblVehicleEF	LHD1	0.07	0.08
tblVehicleEF	LHD1	1.07	1.37
tblVehicleEF	LHD1	8.6400e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.8040e-003	0.01

tblVehicleEF	LHD1	8.9300e-004	2.1100e-004
tblVehicleEF	LHD1	8.2600e-004	9.6900e-004
tblVehicleEF	LHD1	2.5390e-003	2.5170e-003
tblVehicleEF	LHD1	9.3560e-003	9.8330e-003
tblVehicleEF	LHD1	8.2100e-004	1.9400e-004
tblVehicleEF	LHD1	3.0640e-003	2.4970e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7650e-003	1.3210e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.32	0.47
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	5.8330e-003	6.0260e-003
tblVehicleEF	LHD1	3.6100e-004	9.9000e-005
tblVehicleEF	LHD1	3.0640e-003	2.4970e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7650e-003	1.3210e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.32	0.47
tblVehicleEF	LHD1	0.26	0.07
tblVehicleEF	LHD2	3.6920e-003	2.7700e-003
tblVehicleEF	LHD2	3.6770e-003	3.2640e-003
tblVehicleEF	LHD2	7.3690e-003	7.1780e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.32	0.44
tblVehicleEF	LHD2	1.21	0.48

tblVehicleEF	LHD2	13.71	14.92
tblVehicleEF	LHD2	607.87	614.92
tblVehicleEF	LHD2	26.42	6.42
tblVehicleEF	LHD2	0.09	0.12
tblVehicleEF	LHD2	0.68	1.52
tblVehicleEF	LHD2	1.1660e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.0030e-003	0.01
tblVehicleEF	LHD2	4.2200e-004	9.8000e-005
tblVehicleEF	LHD2	1.1160e-003	1.4470e-003
tblVehicleEF	LHD2	2.6680e-003	2.7370e-003
tblVehicleEF	LHD2	8.6000e-003	0.01
tblVehicleEF	LHD2	3.8800e-004	9.1000e-005
tblVehicleEF	LHD2	1.0790e-003	1.1190e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	6.9700e-004	6.1300e-004
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.07	0.19
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	1.3400e-004	1.4200e-004
tblVehicleEF	LHD2	5.9190e-003	5.9160e-003
tblVehicleEF	LHD2	2.8600e-004	6.4000e-005
tblVehicleEF	LHD2	1.0790e-003	1.1190e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.9700e-004	6.1300e-004

tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.19
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	3.6920e-003	2.7770e-003
tblVehicleEF	LHD2	3.7200e-003	3.2860e-003
tblVehicleEF	LHD2	7.1240e-003	6.9030e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.32	0.45
tblVehicleEF	LHD2	1.16	0.45
tblVehicleEF	LHD2	13.71	14.92
tblVehicleEF	LHD2	607.87	614.93
tblVehicleEF	LHD2	26.42	6.38
tblVehicleEF	LHD2	0.09	0.12
tblVehicleEF	LHD2	0.64	1.43
tblVehicleEF	LHD2	1.1660e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.0030e-003	0.01
tblVehicleEF	LHD2	4.2200e-004	9.8000e-005
tblVehicleEF	LHD2	1.1160e-003	1.4470e-003
tblVehicleEF	LHD2	2.6680e-003	2.7370e-003
tblVehicleEF	LHD2	8.6000e-003	0.01
tblVehicleEF	LHD2	3.8800e-004	9.1000e-005
tblVehicleEF	LHD2	1.6790e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.0330e-003	1.1680e-003
tblVehicleEF	LHD2	0.04	0.06

tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.10	0.03
tblVehicleEF	LHD2	1.3400e-004	1.4200e-004
tblVehicleEF	LHD2	5.9190e-003	5.9160e-003
tblVehicleEF	LHD2	2.8500e-004	6.3000e-005
tblVehicleEF	LHD2	1.6790e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.0330e-003	1.1680e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	3.6920e-003	2.7710e-003
tblVehicleEF	LHD2	3.6660e-003	3.2670e-003
tblVehicleEF	LHD2	7.4110e-003	7.1290e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.32	0.44
tblVehicleEF	LHD2	1.22	0.47
tblVehicleEF	LHD2	13.71	14.92
tblVehicleEF	LHD2	607.87	614.92
tblVehicleEF	LHD2	26.42	6.42
tblVehicleEF	LHD2	0.09	0.12
tblVehicleEF	LHD2	0.67	1.49
tblVehicleEF	LHD2	1.1660e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.0030e-003	0.01
tblVehicleEF	LHD2	4.2200e-004	9.8000e-005

tblVehicleEF	LHD2	1.1160e-003	1.4470e-003
tblVehicleEF	LHD2	2.6680e-003	2.7370e-003
tblVehicleEF	LHD2	8.6000e-003	0.01
tblVehicleEF	LHD2	3.8800e-004	9.1000e-005
tblVehicleEF	LHD2	1.0460e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	6.6900e-004	6.3500e-004
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.10	0.03
tblVehicleEF	LHD2	1.3400e-004	1.4200e-004
tblVehicleEF	LHD2	5.9190e-003	5.9160e-003
tblVehicleEF	LHD2	2.8600e-004	6.3000e-005
tblVehicleEF	LHD2	1.0460e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6900e-004	6.3500e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	MCY	0.51	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.57	18.85
tblVehicleEF	MCY	9.66	8.64
tblVehicleEF	MCY	183.25	207.60
tblVehicleEF	MCY	44.44	60.36

tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	2.3160e-003	1.7970e-003
tblVehicleEF	MCY	3.5910e-003	2.7750e-003
tblVehicleEF	MCY	2.1630e-003	1.6800e-003
tblVehicleEF	MCY	3.3760e-003	2.6090e-003
tblVehicleEF	MCY	1.17	1.43
tblVehicleEF	MCY	0.66	0.79
tblVehicleEF	MCY	0.69	0.76
tblVehicleEF	MCY	2.45	2.11
tblVehicleEF	MCY	0.59	1.77
tblVehicleEF	MCY	2.04	1.83
tblVehicleEF	MCY	2.2100e-003	2.0540e-003
tblVehicleEF	MCY	6.6200e-004	5.9700e-004
tblVehicleEF	MCY	1.17	1.43
tblVehicleEF	MCY	0.66	0.79
tblVehicleEF	MCY	0.69	0.76
tblVehicleEF	MCY	3.06	2.61
tblVehicleEF	MCY	0.59	1.77
tblVehicleEF	MCY	2.22	2.00
tblVehicleEF	MCY	0.50	0.31
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	18.11	18.83
tblVehicleEF	MCY	8.87	7.90
tblVehicleEF	MCY	183.25	207.41
tblVehicleEF	MCY	44.44	58.44
tblVehicleEF	MCY	0.98	0.97
tblVehicleEF	MCY	2.3160e-003	1.7970e-003

tblVehicleEF	MCY	3.5910e-003	2.7750e-003
tblVehicleEF	MCY	2.1630e-003	1.6800e-003
tblVehicleEF	MCY	3.3760e-003	2.6090e-003
tblVehicleEF	MCY	1.97	2.75
tblVehicleEF	MCY	0.78	1.09
tblVehicleEF	MCY	1.23	1.72
tblVehicleEF	MCY	2.40	2.07
tblVehicleEF	MCY	0.56	1.74
tblVehicleEF	MCY	1.82	1.61
tblVehicleEF	MCY	2.2010e-003	2.0530e-003
tblVehicleEF	MCY	6.4300e-004	5.7800e-004
tblVehicleEF	MCY	1.97	2.75
tblVehicleEF	MCY	0.78	1.09
tblVehicleEF	MCY	1.23	1.72
tblVehicleEF	MCY	3.00	2.56
tblVehicleEF	MCY	0.56	1.74
tblVehicleEF	MCY	1.98	1.75
tblVehicleEF	MCY	0.51	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.59	18.30
tblVehicleEF	MCY	9.77	8.43
tblVehicleEF	MCY	183.25	206.64
tblVehicleEF	MCY	44.44	59.88
tblVehicleEF	MCY	1.10	1.09
tblVehicleEF	MCY	2.3160e-003	1.7970e-003
tblVehicleEF	MCY	3.5910e-003	2.7750e-003
tblVehicleEF	MCY	2.1630e-003	1.6800e-003

tblVehicleEF	MCY	3.3760e-003	2.6090e-003
tblVehicleEF	MCY	1.25	1.64
tblVehicleEF	MCY	0.85	1.05
tblVehicleEF	MCY	0.66	0.76
tblVehicleEF	MCY	2.46	2.09
tblVehicleEF	MCY	0.68	2.02
tblVehicleEF	MCY	2.07	1.79
tblVehicleEF	MCY	2.2110e-003	2.0450e-003
tblVehicleEF	MCY	6.6500e-004	5.9300e-004
tblVehicleEF	MCY	1.25	1.64
tblVehicleEF	MCY	0.85	1.05
tblVehicleEF	MCY	0.66	0.76
tblVehicleEF	MCY	3.07	2.59
tblVehicleEF	MCY	0.68	2.02
tblVehicleEF	MCY	2.25	1.95
tblVehicleEF	MDV	0.01	4.1640e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.17	0.92
tblVehicleEF	MDV	2.30	2.99
tblVehicleEF	MDV	483.05	396.16
tblVehicleEF	MDV	101.29	84.06
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	2.0950e-003	1.4100e-003
tblVehicleEF	MDV	2.4110e-003	1.8510e-003
tblVehicleEF	MDV	1.9310e-003	1.3010e-003
tblVehicleEF	MDV	2.2170e-003	1.7020e-003
tblVehicleEF	MDV	0.07	0.10

tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.09	0.46
tblVehicleEF	MDV	0.17	0.38
tblVehicleEF	MDV	4.8370e-003	3.8690e-003
tblVehicleEF	MDV	1.0530e-003	8.2200e-004
tblVehicleEF	MDV	0.07	0.10
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.09	0.46
tblVehicleEF	MDV	0.19	0.41
tblVehicleEF	MDV	0.01	4.6800e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.30	1.09
tblVehicleEF	MDV	1.97	2.49
tblVehicleEF	MDV	507.73	417.66
tblVehicleEF	MDV	101.29	83.09
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	2.0950e-003	1.4100e-003
tblVehicleEF	MDV	2.4110e-003	1.8510e-003
tblVehicleEF	MDV	1.9310e-003	1.3010e-003
tblVehicleEF	MDV	2.2170e-003	1.7020e-003
tblVehicleEF	MDV	0.12	0.19
tblVehicleEF	MDV	0.16	0.17
tblVehicleEF	MDV	0.11	0.17

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.09	0.45
tblVehicleEF	MDV	0.15	0.32
tblVehicleEF	MDV	5.0860e-003	4.0790e-003
tblVehicleEF	MDV	1.0470e-003	8.1200e-004
tblVehicleEF	MDV	0.12	0.19
tblVehicleEF	MDV	0.16	0.17
tblVehicleEF	MDV	0.11	0.17
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.09	0.45
tblVehicleEF	MDV	0.17	0.35
tblVehicleEF	MDV	0.01	4.0920e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.12	0.88
tblVehicleEF	MDV	2.36	2.97
tblVehicleEF	MDV	474.94	392.53
tblVehicleEF	MDV	101.29	84.03
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	2.0950e-003	1.4100e-003
tblVehicleEF	MDV	2.4110e-003	1.8510e-003
tblVehicleEF	MDV	1.9310e-003	1.3010e-003
tblVehicleEF	MDV	2.2170e-003	1.7020e-003
tblVehicleEF	MDV	0.07	0.10
tblVehicleEF	MDV	0.17	0.16
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.52

tblVehicleEF	MDV	0.18	0.38
tblVehicleEF	MDV	4.7550e-003	3.8330e-003
tblVehicleEF	MDV	1.0540e-003	8.2100e-004
tblVehicleEF	MDV	0.07	0.10
tblVehicleEF	MDV	0.17	0.16
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.11	0.52
tblVehicleEF	MDV	0.19	0.41
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	1.75	0.33
tblVehicleEF	MH	5.12	0.00
tblVehicleEF	MH	1,098.66	929.33
tblVehicleEF	MH	58.67	0.00
tblVehicleEF	MH	1.14	4.27
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.02	0.14
tblVehicleEF	MH	1.0060e-003	0.00
tblVehicleEF	MH	3.2200e-003	4.0000e-003
tblVehicleEF	MH	0.02	0.13
tblVehicleEF	MH	9.2500e-004	0.00
tblVehicleEF	MH	0.95	0.00
tblVehicleEF	MH	0.06	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00

tblVehicleEF	MH	0.30	0.00
tblVehicleEF	MH	0.01	8.7850e-003
tblVehicleEF	MH	6.7600e-004	0.00
tblVehicleEF	MH	0.95	0.00
tblVehicleEF	MH	0.06	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.32	0.00
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	1.79	0.33
tblVehicleEF	MH	4.82	0.00
tblVehicleEF	MH	1,098.66	929.33
tblVehicleEF	MH	58.67	0.00
tblVehicleEF	MH	1.05	4.03
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.02	0.14
tblVehicleEF	MH	1.0060e-003	0.00
tblVehicleEF	MH	3.2200e-003	4.0000e-003
tblVehicleEF	MH	0.02	0.13
tblVehicleEF	MH	9.2500e-004	0.00
tblVehicleEF	MH	1.47	0.00
tblVehicleEF	MH	0.07	0.00
tblVehicleEF	MH	0.60	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00

tblVehicleEF	MH	0.28	0.00
tblVehicleEF	MH	0.01	8.7850e-003
tblVehicleEF	MH	6.7100e-004	0.00
tblVehicleEF	MH	1.47	0.00
tblVehicleEF	MH	0.07	0.00
tblVehicleEF	MH	0.60	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.31	0.00
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
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tblVehicleEF	MH	5.17	0.00
tblVehicleEF	MH	1,098.66	929.33
tblVehicleEF	MH	58.67	0.00
tblVehicleEF	MH	1.12	4.20
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.02	0.14
tblVehicleEF	MH	1.0060e-003	0.00
tblVehicleEF	MH	3.2200e-003	4.0000e-003
tblVehicleEF	MH	0.02	0.13
tblVehicleEF	MH	9.2500e-004	0.00
tblVehicleEF	MH	1.03	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00

tblVehicleEF	MH	0.30	0.00
tblVehicleEF	MH	0.01	8.7850e-003
tblVehicleEF	MH	6.7700e-004	0.00
tblVehicleEF	MH	1.03	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.33	0.00
tblVehicleEF	MHD	0.02	2.7550e-003
tblVehicleEF	MHD	3.3510e-003	8.7300e-004
tblVehicleEF	MHD	0.05	7.0300e-003
tblVehicleEF	MHD	0.34	0.33
tblVehicleEF	MHD	0.28	0.12
tblVehicleEF	MHD	5.31	0.81
tblVehicleEF	MHD	138.31	67.29
tblVehicleEF	MHD	1,125.72	911.02
tblVehicleEF	MHD	59.27	7.21
tblVehicleEF	MHD	0.37	0.40
tblVehicleEF	MHD	0.70	0.91
tblVehicleEF	MHD	1.0200e-004	4.3400e-004
tblVehicleEF	MHD	2.8090e-003	9.4670e-003
tblVehicleEF	MHD	7.6600e-004	8.3000e-005
tblVehicleEF	MHD	9.7000e-005	4.1500e-004
tblVehicleEF	MHD	2.6840e-003	9.0550e-003
tblVehicleEF	MHD	7.0500e-004	7.6000e-005
tblVehicleEF	MHD	1.0820e-003	4.1800e-004

tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	6.9100e-004	2.2800e-004
tblVehicleEF	MHD	0.03	9.5450e-003
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.33	0.04
tblVehicleEF	MHD	1.3310e-003	6.3800e-004
tblVehicleEF	MHD	0.01	8.6560e-003
tblVehicleEF	MHD	6.8600e-004	7.1000e-005
tblVehicleEF	MHD	1.0820e-003	4.1800e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.9100e-004	2.2800e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	0.01	2.6270e-003
tblVehicleEF	MHD	3.3970e-003	8.8800e-004
tblVehicleEF	MHD	0.04	6.7570e-003
tblVehicleEF	MHD	0.25	0.29
tblVehicleEF	MHD	0.28	0.12
tblVehicleEF	MHD	5.04	0.76
tblVehicleEF	MHD	146.49	67.24
tblVehicleEF	MHD	1,125.72	911.02
tblVehicleEF	MHD	59.27	7.14
tblVehicleEF	MHD	0.38	0.39
tblVehicleEF	MHD	0.66	0.86

tblVehicleEF	MHD	8.6000e-005	3.6900e-004
tblVehicleEF	MHD	2.8090e-003	9.4670e-003
tblVehicleEF	MHD	7.6600e-004	8.3000e-005
tblVehicleEF	MHD	8.2000e-005	3.5300e-004
tblVehicleEF	MHD	2.6840e-003	9.0550e-003
tblVehicleEF	MHD	7.0500e-004	7.6000e-005
tblVehicleEF	MHD	1.6890e-003	7.5100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	1.0300e-003	4.4600e-004
tblVehicleEF	MHD	0.03	9.6090e-003
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.31	0.04
tblVehicleEF	MHD	1.4080e-003	6.3800e-004
tblVehicleEF	MHD	0.01	8.6560e-003
tblVehicleEF	MHD	6.8100e-004	7.1000e-005
tblVehicleEF	MHD	1.6890e-003	7.5100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.0300e-003	4.4600e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.34	0.04
tblVehicleEF	MHD	0.02	2.9460e-003
tblVehicleEF	MHD	3.3370e-003	8.7400e-004
tblVehicleEF	MHD	0.05	6.9640e-003
tblVehicleEF	MHD	0.47	0.39

tblVehicleEF	MHD	0.28	0.12
tblVehicleEF	MHD	5.36	0.80
tblVehicleEF	MHD	126.99	67.35
tblVehicleEF	MHD	1,125.72	911.02
tblVehicleEF	MHD	59.27	7.20
tblVehicleEF	MHD	0.35	0.41
tblVehicleEF	MHD	0.68	0.89
tblVehicleEF	MHD	1.2400e-004	5.2400e-004
tblVehicleEF	MHD	2.8090e-003	9.4670e-003
tblVehicleEF	MHD	7.6600e-004	8.3000e-005
tblVehicleEF	MHD	1.1900e-004	5.0100e-004
tblVehicleEF	MHD	2.6840e-003	9.0550e-003
tblVehicleEF	MHD	7.0500e-004	7.6000e-005
tblVehicleEF	MHD	1.0540e-003	4.3600e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.6300e-004	2.3900e-004
tblVehicleEF	MHD	0.03	9.5510e-003
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.33	0.04
tblVehicleEF	MHD	1.2250e-003	6.3800e-004
tblVehicleEF	MHD	0.01	8.6560e-003
tblVehicleEF	MHD	6.8600e-004	7.1000e-005
tblVehicleEF	MHD	1.0540e-003	4.3600e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	6.6300e-004	2.3900e-004

tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	OBUS	0.01	8.5220e-003
tblVehicleEF	OBUS	6.0000e-003	5.4050e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.25	0.49
tblVehicleEF	OBUS	0.44	0.70
tblVehicleEF	OBUS	5.22	2.68
tblVehicleEF	OBUS	91.95	64.37
tblVehicleEF	OBUS	1,222.80	1,335.49
tblVehicleEF	OBUS	68.36	21.28
tblVehicleEF	OBUS	0.19	0.23
tblVehicleEF	OBUS	0.63	0.91
tblVehicleEF	OBUS	1.8000e-005	7.5000e-005
tblVehicleEF	OBUS	2.5040e-003	8.4680e-003
tblVehicleEF	OBUS	8.5000e-004	2.1800e-004
tblVehicleEF	OBUS	1.7000e-005	7.2000e-005
tblVehicleEF	OBUS	2.3790e-003	8.0880e-003
tblVehicleEF	OBUS	7.8100e-004	2.0100e-004
tblVehicleEF	OBUS	1.5080e-003	2.6670e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	7.8700e-004	1.1770e-003
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.33	0.13

tblVehicleEF	OBUS	8.8900e-004	6.1500e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7500e-004	2.1100e-004
tblVehicleEF	OBUS	1.5080e-003	2.6670e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	7.8700e-004	1.1770e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	OBUS	0.01	8.5920e-003
tblVehicleEF	OBUS	6.1100e-003	5.5390e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.48
tblVehicleEF	OBUS	0.45	0.72
tblVehicleEF	OBUS	4.93	2.49
tblVehicleEF	OBUS	96.41	63.70
tblVehicleEF	OBUS	1,222.80	1,335.52
tblVehicleEF	OBUS	68.36	20.96
tblVehicleEF	OBUS	0.20	0.21
tblVehicleEF	OBUS	0.59	0.84
tblVehicleEF	OBUS	1.5000e-005	6.7000e-005
tblVehicleEF	OBUS	2.5040e-003	8.4680e-003
tblVehicleEF	OBUS	8.5000e-004	2.1800e-004
tblVehicleEF	OBUS	1.4000e-005	6.4000e-005
tblVehicleEF	OBUS	2.3790e-003	8.0880e-003
tblVehicleEF	OBUS	7.8100e-004	2.0100e-004

tblVehicleEF	OBUS	2.2910e-003	4.6970e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	1.1730e-003	2.2650e-003
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.31	0.12
tblVehicleEF	OBUS	9.3200e-004	6.0900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7000e-004	2.0700e-004
tblVehicleEF	OBUS	2.2910e-003	4.6970e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	1.1730e-003	2.2650e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.34	0.13
tblVehicleEF	OBUS	0.01	8.4630e-003
tblVehicleEF	OBUS	5.9720e-003	5.4160e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.25	0.49
tblVehicleEF	OBUS	0.44	0.70
tblVehicleEF	OBUS	5.27	2.67
tblVehicleEF	OBUS	85.78	65.29
tblVehicleEF	OBUS	1,222.80	1,335.50
tblVehicleEF	OBUS	68.36	21.26
tblVehicleEF	OBUS	0.18	0.24

tblVehicleEF	OBUS	0.62	0.89
tblVehicleEF	OBUS	2.1000e-005	8.7000e-005
tblVehicleEF	OBUS	2.5040e-003	8.4680e-003
tblVehicleEF	OBUS	8.5000e-004	2.1800e-004
tblVehicleEF	OBUS	2.0000e-005	8.3000e-005
tblVehicleEF	OBUS	2.3790e-003	8.0880e-003
tblVehicleEF	OBUS	7.8100e-004	2.0100e-004
tblVehicleEF	OBUS	1.5020e-003	2.7830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	7.6600e-004	1.2510e-003
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.31
tblVehicleEF	OBUS	0.33	0.13
tblVehicleEF	OBUS	8.3000e-004	6.2400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7600e-004	2.1000e-004
tblVehicleEF	OBUS	1.5020e-003	2.7830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	7.6600e-004	1.2510e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.31
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	SBUS	0.83	0.09
tblVehicleEF	SBUS	0.01	6.6030e-003
tblVehicleEF	SBUS	0.06	8.0990e-003

tblVehicleEF	SBUS	8.04	3.43
tblVehicleEF	SBUS	0.70	0.55
tblVehicleEF	SBUS	7.18	1.08
tblVehicleEF	SBUS	1,118.19	369.74
tblVehicleEF	SBUS	1,082.51	1,096.55
tblVehicleEF	SBUS	55.02	6.92
tblVehicleEF	SBUS	8.69	3.32
tblVehicleEF	SBUS	3.91	4.42
tblVehicleEF	SBUS	8.2920e-003	3.3040e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.8500e-004	4.8000e-005
tblVehicleEF	SBUS	7.9330e-003	3.1610e-003
tblVehicleEF	SBUS	2.6760e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	7.2100e-004	4.4000e-005
tblVehicleEF	SBUS	3.6590e-003	1.5760e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	0.96	0.41
tblVehicleEF	SBUS	1.9290e-003	7.9200e-004
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.01	0.07
tblVehicleEF	SBUS	0.38	0.05
tblVehicleEF	SBUS	0.01	3.5360e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.7500e-004	6.9000e-005
tblVehicleEF	SBUS	3.6590e-003	1.5760e-003

tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.38	0.59
tblVehicleEF	SBUS	1.9290e-003	7.9200e-004
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.07
tblVehicleEF	SBUS	0.42	0.05
tblVehicleEF	SBUS	0.83	0.09
tblVehicleEF	SBUS	0.01	6.6870e-003
tblVehicleEF	SBUS	0.06	6.7520e-003
tblVehicleEF	SBUS	7.94	3.39
tblVehicleEF	SBUS	0.71	0.56
tblVehicleEF	SBUS	5.72	0.77
tblVehicleEF	SBUS	1,168.50	378.98
tblVehicleEF	SBUS	1,082.51	1,096.56
tblVehicleEF	SBUS	55.02	6.42
tblVehicleEF	SBUS	8.97	3.40
tblVehicleEF	SBUS	3.68	4.16
tblVehicleEF	SBUS	6.9900e-003	2.7930e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.8500e-004	4.8000e-005
tblVehicleEF	SBUS	6.6880e-003	2.6720e-003
tblVehicleEF	SBUS	2.6760e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	7.2100e-004	4.4000e-005
tblVehicleEF	SBUS	5.6810e-003	2.7600e-003
tblVehicleEF	SBUS	0.03	0.01

tblVehicleEF	SBUS	0.95	0.41
tblVehicleEF	SBUS	2.9530e-003	1.4670e-003
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.01	3.6240e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5000e-004	6.3000e-005
tblVehicleEF	SBUS	5.6810e-003	2.7600e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.38	0.59
tblVehicleEF	SBUS	2.9530e-003	1.4670e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.83	0.09
tblVehicleEF	SBUS	0.01	6.6020e-003
tblVehicleEF	SBUS	0.07	8.2440e-003
tblVehicleEF	SBUS	8.19	3.48
tblVehicleEF	SBUS	0.70	0.55
tblVehicleEF	SBUS	7.44	1.10
tblVehicleEF	SBUS	1,048.72	356.98
tblVehicleEF	SBUS	1,082.51	1,096.55
tblVehicleEF	SBUS	55.02	6.96
tblVehicleEF	SBUS	8.31	3.21
tblVehicleEF	SBUS	3.85	4.35
tblVehicleEF	SBUS	0.01	4.0110e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.8500e-004	4.8000e-005
tblVehicleEF	SBUS	9.6530e-003	3.8370e-003
tblVehicleEF	SBUS	2.6760e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	7.2100e-004	4.4000e-005
tblVehicleEF	SBUS	3.5200e-003	1.4840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	0.96	0.41
tblVehicleEF	SBUS	1.8620e-003	8.1800e-004
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.39	0.05
tblVehicleEF	SBUS	0.01	3.4160e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.7900e-004	6.9000e-005
tblVehicleEF	SBUS	3.5200e-003	1.4840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.39	0.59
tblVehicleEF	SBUS	1.8620e-003	8.1800e-004
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.43	0.05
tblVehicleEF	UBUS	2.20	3.04
tblVehicleEF	UBUS	0.06	0.02
tblVehicleEF	UBUS	9.91	23.60

tblVehicleEF	UBUS	10.15	1.86
tblVehicleEF	UBUS	1,905.83	1,635.62
tblVehicleEF	UBUS	113.27	22.96
tblVehicleEF	UBUS	7.78	0.30
tblVehicleEF	UBUS	0.58	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.10	2.1820e-003
tblVehicleEF	UBUS	1.2130e-003	2.2400e-004
tblVehicleEF	UBUS	0.25	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.09	2.0670e-003
tblVehicleEF	UBUS	1.1150e-003	2.0600e-004
tblVehicleEF	UBUS	5.0170e-003	2.8050e-003
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	2.8810e-003	1.1470e-003
tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	0.03	0.08
tblVehicleEF	UBUS	0.79	0.10
tblVehicleEF	UBUS	9.5330e-003	6.3200e-003
tblVehicleEF	UBUS	1.3160e-003	2.2700e-004
tblVehicleEF	UBUS	5.0170e-003	2.8050e-003
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	2.8810e-003	1.1470e-003
tblVehicleEF	UBUS	2.96	3.11
tblVehicleEF	UBUS	0.03	0.08
tblVehicleEF	UBUS	0.86	0.10
tblVehicleEF	UBUS	2.20	3.04

tblVehicleEF	UBUS	0.05	0.02
tblVehicleEF	UBUS	9.96	23.60
tblVehicleEF	UBUS	8.81	1.58
tblVehicleEF	UBUS	1,905.83	1,635.63
tblVehicleEF	UBUS	113.27	22.49
tblVehicleEF	UBUS	7.32	0.30
tblVehicleEF	UBUS	0.58	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.10	2.1820e-003
tblVehicleEF	UBUS	1.2130e-003	2.2400e-004
tblVehicleEF	UBUS	0.25	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.09	2.0670e-003
tblVehicleEF	UBUS	1.1150e-003	2.0600e-004
tblVehicleEF	UBUS	7.4730e-003	4.9810e-003
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	4.2880e-003	2.2660e-003
tblVehicleEF	UBUS	0.69	0.05
tblVehicleEF	UBUS	0.02	0.07
tblVehicleEF	UBUS	0.72	0.09
tblVehicleEF	UBUS	9.5340e-003	6.3200e-003
tblVehicleEF	UBUS	1.2930e-003	2.2300e-004
tblVehicleEF	UBUS	7.4730e-003	4.9810e-003
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	4.2880e-003	2.2660e-003
tblVehicleEF	UBUS	2.97	3.11
tblVehicleEF	UBUS	0.02	0.07

tblVehicleEF	UBUS	0.79	0.09
tblVehicleEF	UBUS	2.20	3.04
tblVehicleEF	UBUS	0.06	0.02
tblVehicleEF	UBUS	9.90	23.60
tblVehicleEF	UBUS	10.35	1.85
tblVehicleEF	UBUS	1,905.83	1,635.62
tblVehicleEF	UBUS	113.27	22.93
tblVehicleEF	UBUS	7.63	0.30
tblVehicleEF	UBUS	0.58	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.10	2.1820e-003
tblVehicleEF	UBUS	1.2130e-003	2.2400e-004
tblVehicleEF	UBUS	0.25	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.09	2.0670e-003
tblVehicleEF	UBUS	1.1150e-003	2.0600e-004
tblVehicleEF	UBUS	5.4520e-003	2.8430e-003
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	2.9590e-003	1.2010e-003
tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	0.80	0.09
tblVehicleEF	UBUS	9.5330e-003	6.3200e-003
tblVehicleEF	UBUS	1.3200e-003	2.2700e-004
tblVehicleEF	UBUS	5.4520e-003	2.8430e-003
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	2.9590e-003	1.2010e-003

tblVehicleEF	UBUS	2.96	3.11
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	0.88	0.10
tblVehicleTrips	ST_TR	9.91	9.83
tblVehicleTrips	SU_TR	8.62	8.54
tblVehicleTrips	WD_TR	9.52	9.44
tblWater	IndoorWaterUseRate	12,835,343.05	10,268,274.44
tblWater	OutdoorWaterUseRate	8,091,846.70	6,473,477.36
tblWoodstoves	NumberCatalytic	9.85	0.00
tblWoodstoves	NumberNoncatalytic	9.85	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.2200	49.0415	58.2614	0.1013	19.9862	2.4637	22.2725	10.1696	2.3372	12.2730	0.0000	9,796.9089	9,796.9089	1.9498	0.0000	9,841.4913
2023	43.3259	57.7118	76.8482	0.1325	1.2522	2.7720	4.0241	0.3351	2.6232	2.9583	0.0000	12,806.6406	12,806.6406	2.5189	0.0000	12,869.6123
Maximum	**43.3259**	**57.7118**	**76.8482**	**0.1325**	**19.9862**	**2.7720**	**22.2725**	**10.1696**	**2.6232**	**12.2730**	**0.0000**	**12,806.6406**	**12,806.6406**	**2.5189**	**0.0000**	**12,869.6123**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.2200	49.0415	58.2614	0.1013	7.8369	2.4637	10.1232	3.9790	2.3372	6.0824	0.0000	9,796.9089	9,796.9089	1.9498	0.0000	9,841.4913
2023	43.3259	57.7118	76.8482	0.1325	0.7611	2.7720	3.5331	0.2146	2.6232	2.8378	0.0000	12,806.6406	12,806.6406	2.5189	0.0000	12,869.6123
Maximum	**43.3259**	**57.7118**	**76.8482**	**0.1325**	**7.8369**	**2.7720**	**10.1232**	**3.9790**	**2.6232**	**6.0824**	**0.0000**	**12,806.6406**	**12,806.6406**	**2.5189**	**0.0000**	**12,869.6123**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.52**	**0.00**	**48.07**	**60.08**	**0.00**	**41.44**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.5011	3.4553	17.6470	0.0217		0.3542	0.3542		0.3542	0.3542	0.0000	4,201.0295	4,201.0295	0.1081	0.0765	4,226.5238
Energy	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
Mobile	4.3766	11.8617	38.9978	0.1352	14.0000	0.1096	14.1096	3.7345	0.1028	3.8373		13,926.4386	13,926.4386	0.3854		13,936.0736
Total	**12.9800**	**16.1912**	**57.0168**	**0.1625**	**14.0000**	**0.5345**	**14.5345**	**3.7345**	**0.5277**	**4.2622**	**0.0000**	**19,243.5003**	**19,243.5003**	**0.5149**	**0.0969**	**19,285.2616**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.5011	3.4553	17.6470	0.0217		0.3542	0.3542		0.3542	0.3542	0.0000	4,201.0295	4,201.0295	0.1081	0.0765	4,226.5238
Energy	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
Mobile	4.3766	11.8617	38.9978	0.1352	14.0000	0.1096	14.1096	3.7345	0.1028	3.8373		13,926.4386	13,926.4386	0.3854		13,936.0736
Total	**12.9800**	**16.1912**	**57.0168**	**0.1625**	**14.0000**	**0.5345**	**14.5345**	**3.7345**	**0.5277**	**4.2622**	**0.0000**	**19,243.5003**	**19,243.5003**	**0.5149**	**0.0969**	**19,285.2616**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2022	6/10/2022	5	30	
2	Grading	Grading	6/11/2022	9/23/2022	5	75	
3	Building Construction	Building Construction	9/24/2022	6/30/2023	5	200	
4	Architectural Coating	Architectural Coating	4/10/2023	6/30/2023	5	60	
5	Paving	Paving	4/17/2023	6/30/2023	5	55	

Acres of Grading (Site Preparation Phase): 48.62

Acres of Grading (Grading Phase): 48.62

Acres of Paving: 0

Residential Indoor: 718,065; Residential Outdoor: 239,355; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Crawler Tractors	2	8.00	97	0.37
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
Building Construction	Aerial Lifts	1	8.00	46	0.45
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	7	8.00	89	0.20
Building Construction	Generator Sets	6	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	10	8.00	97	0.37
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	7.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	25	71.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	14.00	0.00	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

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.7850	0.0000	19.7850	10.1163	0.0000	10.1163			0.0000			0.0000
Off-Road	4.0309	39.2966	20.6839	0.0380		2.2849	2.2849		2.1021	2.1021		3,686.3768	3,686.3768	1.1923		3,716.1830
Total	**4.0309**	**39.2966**	**20.6839**	**0.0380**	**19.7850**	**2.2849**	**22.0699**	**10.1163**	**2.1021**	**12.2184**		**3,686.3768**	**3,686.3768**	**1.1923**		**3,716.1830**

3.2 Site Preparation - 2022

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
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
Worker	0.0781	0.0487	0.5625	1.8000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		179.7366	179.7366	4.5100e-003		179.8494
Total	**0.0781**	**0.0487**	**0.5625**	**1.8000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**179.7366**	**179.7366**	**4.5100e-003**		**179.8494**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7161	0.0000	7.7161	3.9453	0.0000	3.9453			0.0000			0.0000
Off-Road	4.0309	39.2966	20.6839	0.0380		2.2849	2.2849		2.1021	2.1021	0.0000	3,686.3768	3,686.3768	1.1923		3,716.1830
Total	**4.0309**	**39.2966**	**20.6839**	**0.0380**	**7.7161**	**2.2849**	**10.0010**	**3.9453**	**2.1021**	**6.0474**	**0.0000**	**3,686.3768**	**3,686.3768**	**1.1923**		**3,716.1830**

3.2 Site Preparation - 2022

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
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
Worker	0.0781	0.0487	0.5625	1.8000e-003	0.1207	1.4400e-003	0.1222	0.0336	1.3200e-003	0.0349		179.7366	179.7366	4.5100e-003		179.8494
Total	**0.0781**	**0.0487**	**0.5625**	**1.8000e-003**	**0.1207**	**1.4400e-003**	**0.1222**	**0.0336**	**1.3200e-003**	**0.0349**		**179.7366**	**179.7366**	**4.5100e-003**		**179.8494**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7097	0.0000	6.7097	3.3845	0.0000	3.3845			0.0000			0.0000
Off-Road	4.0552	41.9500	29.5346	0.0621		1.9710	1.9710		1.8134	1.8134		6,011.5680	6,011.5680	1.9443		6,060.1746
Total	**4.0552**	**41.9500**	**29.5346**	**0.0621**	**6.7097**	**1.9710**	**8.6807**	**3.3845**	**1.8134**	**5.1978**		**6,011.5680**	**6,011.5680**	**1.9443**		**6,060.1746**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.6000e-004	0.0221	5.2900e-003	7.0000e-005	1.6300e-003	6.0000e-005	1.6900e-003	4.5000e-004	6.0000e-005	5.1000e-004		7.5083	7.5083	5.3000e-004		7.5215
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
Worker	0.0868	0.0541	0.6250	2.0000e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		199.7073	199.7073	5.0100e-003		199.8326
Total	**0.0874**	**0.0762**	**0.6302**	**2.0700e-003**	**0.2252**	**1.6600e-003**	**0.2268**	**0.0597**	**1.5300e-003**	**0.0613**		**207.2156**	**207.2156**	**5.5400e-003**		**207.3542**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6168	0.0000	2.6168	1.3199	0.0000	1.3199			0.0000			0.0000
Off-Road	4.0552	41.9500	29.5346	0.0621		1.9710	1.9710		1.8134	1.8134	0.0000	6,011.5680	6,011.5680	1.9443		6,060.1746
Total	**4.0552**	**41.9500**	**29.5346**	**0.0621**	**2.6168**	**1.9710**	**4.5878**	**1.3199**	**1.8134**	**3.1333**	**0.0000**	**6,011.5680**	**6,011.5680**	**1.9443**		**6,060.1746**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.6000e-004	0.0221	5.2900e-003	7.0000e-005	1.0600e-003	6.0000e-005	1.1300e-003	3.1000e-004	6.0000e-005	3.7000e-004		7.5083	7.5083	5.3000e-004		7.5215
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
Worker	0.0868	0.0541	0.6250	2.0000e-003	0.1342	1.6000e-003	0.1358	0.0373	1.4700e-003	0.0388		199.7073	199.7073	5.0100e-003		199.8326
Total	**0.0874**	**0.0762**	**0.6302**	**2.0700e-003**	**0.1352**	**1.6600e-003**	**0.1369**	**0.0377**	**1.5300e-003**	**0.0392**		**207.2156**	**207.2156**	**5.5400e-003**		**207.3542**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.8543	46.9557	55.5399	0.0890		2.4544	2.4544		2.3286	2.3286		8,537.3401	8,537.3401	1.7297		8,580.5836
Total	**4.8543**	**46.9557**	**55.5399**	**0.0890**		**2.4544**	**2.4544**		**2.3286**	**2.3286**		**8,537.3401**	**8,537.3401**	**1.7297**		**8,580.5836**

3.4 Building Construction - 2022

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
Vendor	0.0577	1.8936	0.5029	5.1600e-003	0.1344	3.6100e-003	0.1380	0.0387	3.4500e-003	0.0421		550.6079	550.6079	0.0358		551.5018
Worker	0.3080	0.1922	2.2186	7.1100e-003	0.7936	5.6700e-003	0.7993	0.2105	5.2300e-003	0.2157		708.9609	708.9609	0.0178		709.4058
Total	**0.3657**	**2.0858**	**2.7215**	**0.0123**	**0.9280**	**9.2800e-003**	**0.9373**	**0.2492**	**8.6800e-003**	**0.2578**		**1,259.5688**	**1,259.5688**	**0.0536**		**1,260.9077**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.8543	46.9557	55.5399	0.0890		2.4544	2.4544		2.3286	2.3286	0.0000	8,537.3401	8,537.3401	1.7297		8,580.5836
Total	**4.8543**	**46.9557**	**55.5399**	**0.0890**		**2.4544**	**2.4544**		**2.3286**	**2.3286**	**0.0000**	**8,537.3401**	**8,537.3401**	**1.7297**		**8,580.5836**

3.4 Building Construction - 2022

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
Vendor	0.0577	1.8936	0.5029	5.1600e-003	0.0903	3.6100e-003	0.0940	0.0279	3.4500e-003	0.0313		550.6079	550.6079	0.0358		551.5018
Worker	0.3080	0.1922	2.2186	7.1100e-003	0.4762	5.6700e-003	0.4819	0.1326	5.2300e-003	0.1378		708.9609	708.9609	0.0178		709.4058
Total	**0.3657**	**2.0858**	**2.7215**	**0.0123**	**0.5666**	**9.2800e-003**	**0.5759**	**0.1605**	**8.6800e-003**	**0.1691**		**1,259.5688**	**1,259.5688**	**0.0536**		**1,260.9077**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.4774	43.2412	55.3171	0.0891		2.1106	2.1106		2.0034	2.0034		8,540.7044	8,540.7044	1.7177		8,583.6463
Total	**4.4774**	**43.2412**	**55.3171**	**0.0891**		**2.1106**	**2.1106**		**2.0034**	**2.0034**		**8,540.7044**	**8,540.7044**	**1.7177**		**8,583.6463**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0431	1.4281	0.4447	4.9900e-003	0.1344	1.6900e-003	0.1361	0.0387	1.6200e-003	0.0403		534.1595	534.1595	0.0310		534.9335
Worker	0.2904	0.1738	2.0448	6.8500e-003	0.7936	5.5300e-003	0.7991	0.2105	5.0900e-003	0.2156		682.5205	682.5205	0.0160		682.9213
Total	**0.3335**	**1.6019**	**2.4895**	**0.0118**	**0.9280**	**7.2200e-003**	**0.9352**	**0.2492**	**6.7100e-003**	**0.2559**		**1,216.6800**	**1,216.6800**	**0.0470**		**1,217.8548**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.4774	43.2412	55.3171	0.0891		2.1106	2.1106		2.0034	2.0034	0.0000	8,540.7044	8,540.7044	1.7177		8,583.6462
Total	**4.4774**	**43.2412**	**55.3171**	**0.0891**		**2.1106**	**2.1106**		**2.0034**	**2.0034**	**0.0000**	**8,540.7044**	**8,540.7044**	**1.7177**		**8,583.6462**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0431	1.4281	0.4447	4.9900e-003	0.0903	1.6900e-003	0.0920	0.0279	1.6200e-003	0.0295		534.1595	534.1595	0.0310		534.9335
Worker	0.2904	0.1738	2.0448	6.8500e-003	0.4762	5.5300e-003	0.4818	0.1326	5.0900e-003	0.1377		682.5205	682.5205	0.0160		682.9213
Total	**0.3335**	**1.6019**	**2.4895**	**0.0118**	**0.5666**	**7.2200e-003**	**0.5738**	**0.1605**	**6.7100e-003**	**0.1672**		**1,216.6800**	**1,216.6800**	**0.0470**		**1,217.8548**

3.5 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.9804					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3833	2.6060	3.6222	5.9400e-003		0.1416	0.1416		0.1416	0.1416		562.8961	562.8961	0.0337		563.7380
Total	**37.3637**	**2.6060**	**3.6222**	**5.9400e-003**		**0.1416**	**0.1416**		**0.1416**	**0.1416**		**562.8961**	**562.8961**	**0.0337**		**563.7380**

3.5 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0573	0.0343	0.4032	1.3500e-003	0.1565	1.0900e-003	0.1576	0.0415	1.0000e-003	0.0425		134.5815	134.5815	3.1600e-003		134.6605
Total	**0.0573**	**0.0343**	**0.4032**	**1.3500e-003**	**0.1565**	**1.0900e-003**	**0.1576**	**0.0415**	**1.0000e-003**	**0.0425**		**134.5815**	**134.5815**	**3.1600e-003**		**134.6605**

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	36.9804					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3833	2.6060	3.6222	5.9400e-003		0.1416	0.1416		0.1416	0.1416	0.0000	562.8961	562.8961	0.0337		563.7380
Total	**37.3637**	**2.6060**	**3.6222**	**5.9400e-003**		**0.1416**	**0.1416**		**0.1416**	**0.1416**	**0.0000**	**562.8961**	**562.8961**	**0.0337**		**563.7380**

3.5 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0573	0.0343	0.4032	1.3500e-003	0.0939	1.0900e-003	0.0950	0.0261	1.0000e-003	0.0271		134.5815	134.5815	3.1600e-003		134.6605
Total	**0.0573**	**0.0343**	**0.4032**	**1.3500e-003**	**0.0939**	**1.0900e-003**	**0.0950**	**0.0261**	**1.0000e-003**	**0.0271**		**134.5815**	**134.5815**	**3.1600e-003**		**134.6605**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0614	0.0367	0.4320	1.4500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		144.1945	144.1945	3.3900e-003		144.2792
Total	**0.0614**	**0.0367**	**0.4320**	**1.4500e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**144.1945**	**144.1945**	**3.3900e-003**		**144.2792**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0614	0.0367	0.4320	1.4500e-003	0.1006	1.1700e-003	0.1018	0.0280	1.0800e-003	0.0291		144.1945	144.1945	3.3900e-003		144.2792
Total	**0.0614**	**0.0367**	**0.4320**	**1.4500e-003**	**0.1006**	**1.1700e-003**	**0.1018**	**0.0280**	**1.0800e-003**	**0.0291**		**144.1945**	**144.1945**	**3.3900e-003**		**144.2792**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.3766	11.8617	38.9978	0.1352	14.0000	0.1096	14.1096	3.7345	0.1028	3.8373		13,926.4386	13,926.4386	0.3854		13,936.0736
Unmitigated	4.3766	11.8617	38.9978	0.1352	14.0000	0.1096	14.1096	3.7345	0.1028	3.8373		13,926.4386	13,926.4386	0.3854		13,936.0736

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,859.68	1,936.51	1682.38	6,305,763	6,305,763
Total	1,859.68	1,936.51	1,682.38	6,305,763	6,305,763

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.553184	0.042828	0.203573	0.117591	0.015120	0.005857	0.021819	0.035126	0.000000	0.000000	0.004903	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/day										lb/day					
NaturalGas Mitigated	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
NaturalGas Unmitigated	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	9486.27	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
Total		**0.1023**	**0.8742**	**0.3720**	**5.5800e-003**		**0.0707**	**0.0707**		**0.0707**	**0.0707**		**1,116.0322**	**1,116.0322**	**0.0214**	**0.0205**	**1,122.6642**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	9.48627	0.1023	0.8742	0.3720	5.5800e-003		0.0707	0.0707		0.0707	0.0707		1,116.0322	1,116.0322	0.0214	0.0205	1,122.6642
Total		**0.1023**	**0.8742**	**0.3720**	**5.5800e-003**		**0.0707**	**0.0707**		**0.0707**	**0.0707**		**1,116.0322**	**1,116.0322**	**0.0214**	**0.0205**	**1,122.6642**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.5011	3.4553	17.6470	0.0217		0.3542	0.3542		0.3542	0.3542	0.0000	4,201.0295	4,201.0295	0.1081	0.0765	4,226.5238
Unmitigated	8.5011	3.4553	17.6470	0.0217		0.3542	0.3542		0.3542	0.3542	0.0000	4,201.0295	4,201.0295	0.1081	0.0765	4,226.5238

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6079					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3824	3.2679	1.3906	0.0209		0.2642	0.2642		0.2642	0.2642	0.0000	4,171.7647	4,171.7647	0.0800	0.0765	4,196.5554
Landscaping	0.4898	0.1874	16.2564	8.6000e-004		0.0900	0.0900		0.0900	0.0900		29.2648	29.2648	0.0281		29.9683
Total	**8.5011**	**3.4553**	**17.6470**	**0.0217**		**0.3542**	**0.3542**		**0.3542**	**0.3542**	**0.0000**	**4,201.0295**	**4,201.0295**	**0.1081**	**0.0765**	**4,226.5238**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6079					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.0211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3824	3.2679	1.3906	0.0209		0.2642	0.2642		0.2642	0.2642	0.0000	4,171.7647	4,171.7647	0.0800	0.0765	4,196.5554
Landscaping	0.4898	0.1874	16.2564	8.6000e-004		0.0900	0.0900		0.0900	0.0900		29.2648	29.2648	0.0281		29.9683
Total	**8.5011**	**3.4553**	**17.6470**	**0.0217**		**0.3542**	**0.3542**		**0.3542**	**0.3542**	**0.0000**	**4,201.0295**	**4,201.0295**	**0.1081**	**0.0765**	**4,226.5238**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX 3.2:
EMFAC2017 EMISSION RATES

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EMFAC2017 Derived CalEEMod Annual Emission Rates: Year 2023[1,2]

Season	Pollutant	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	MCY	SBUS	MH
Annual	CH4_IDLEX	0	0	0	0	0.0045407	0.00276992	0.002755155	0.022399945	0.008522	0	0	0.0872051	0
Annual	CH4_RUNEX	0.0018869	0.0057489	0.0031844	0.0041642	0.0044198	0.003263925	0.00087349	0.027816115	0.0054045	0.3424882	0.3131324	0.0066033	0.0032743
Annual	CH4_STREX	0.0448692	0.0733726	0.0629169	0.0781102	0.0134844	0.007177894	0.007030234	2.14182E-07	0.0240057	0.0246221	0.2420258	0.008099	0
Annual	CO_IDLEX	0	0	0	0	0.1678772	0.126758625	0.328949805	6.433638207	0.4864641	0	0	3.4287623	0
Annual	CO_RUNEX	0.560021	1.2218976	0.7892313	0.9170107	0.5983104	0.443005373	0.121131478	0.238528941	0.7023385	23.596827	18.854788	0.5536067	0.3331045
Annual	CO_STREX	2.0291591	2.2798463	2.5854594	2.9900286	0.8884942	0.47818962	0.809250221	0.004385463	2.6752142	1.8623285	8.642447	1.078573	0
Annual	CO2_NBIO_IDLEX	0	0	0	0	9.3581592	14.92008755	67.2854915	1065.923835	64.367009	0	0	369.73833	0
Annual	CO2_NBIO_RUNEX	251.70403	298.86564	314.21685	396.16171	619.96277	614.9225059	911.0199741	1272.829483	1335.493	1635.6231	207.59836	1096.5469	929.32761
Annual	CO2_NBIO_STREX	52.262945	63.705824	67.25728	84.063345	9.9909554	6.424441145	7.214801684	0.03594404	21.276475	22.961833	60.360049	6.9242759	0
Annual	NOX_IDLEX	0	0	0	0	0.0826802	0.121917702	0.397207898	5.312422425	0.2257829	0	0	3.3195995	0
Annual	NOX_RUNEX	0.0309022	0.1047964	0.0645781	0.0871858	1.3894798	1.517354389	0.908191511	1.955483692	0.905988	0.3035805	1.125469	4.420865	4.2679083
Annual	NOX_STREX[3]	0.1657278	0.2618108	0.2551235	0.3291257	0.2837258	0.159545375	1.799471753	2.495253007	0.6856266	0.2242227	0.2630249	0.7800028	0
Annual	PM10_IDLEX	0	0	0	0	0.0010129	0.001512805	0.000433919	0.002365147	7.511E-05	0	0	0.0033043	0
Annual	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.060417566	0.13034	0.0918981	0.01176	0.7448002	0.13034
Annual	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100668	0.010946027	0.012000003	0.035225137	0.012	0.0202294	0.004	0.0105986	0.016
Annual	PM10_RUNEX	0.0013047	0.0018934	0.0013477	0.0014102	0.0102968	0.013566467	0.009466862	0.024179126	0.0084683	0.0021823	0.0017969	0.0257095	0.1361859
Annual	PM10_STREX	0.0017588	0.0025559	0.0017952	0.0018512	0.0002106	9.84354E-05	8.28075E-05	4.71852E-07	0.0002181	0.0002239	0.0027747	4.794E-05	0
Annual	PM25_IDLEX	0	0	0	0	0.0009691	0.001447362	0.000415148	0.002262832	7.186E-05	0	0	0.0031614	0
Annual	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.025893242	0.05586	0.0393849	0.00504	0.3192001	0.05586
Annual	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025167	0.002736507	0.003000001	0.008806284	0.003	0.0050573	0.001	0.0026497	0.004
Annual	PM25_RUNEX	0.0012018	0.0017423	0.0012406	0.0013009	0.0098328	0.012970752	0.009054989	0.023133139	0.0080878	0.0020674	0.0016796	0.0245874	0.1302946
Annual	PM25_STREX	0.0016172	0.0023502	0.0016506	0.0017022	0.0001937	9.05077E-05	7.61385E-05	4.33851E-07	0.0002005	0.0002059	0.0026088	4.408E-05	0
Annual	ROG_DIURN	0.0499353	0.1617031	0.0834193	0.1040066	0.0023924	0.001119316	0.00041816	2.61104E-06	0.0026672	0.0028048	1.4319645	0.0015764	0
Annual	ROG_HTSK	0.0863623	0.224901	0.1201124	0.1521245	0.0693882	0.033771174	0.014777615	9.67852E-05	0.0265187	0.0159707	0.7872755	0.0114418	0
Annual	ROG_IDLEX	0	0	0	0	0.0196433	0.014878453	0.015150214	0.435555976	0.0456612	0	0	0.4072026	0
Annual	ROG_RESTL	0.0401253	0.1141391	0.0708635	0.09308	0.0012616	0.000613159	0.000227643	1.60287E-06	0.0011772	0.0011467	0.7584722	0.0007923	0
Annual	ROG_RUNEX	0.0069514	0.0249376	0.0126	0.0170823	0.0538669	0.055274928	0.009544935	0.018413033	0.0303843	0.0485813	2.1137636	0.0924064	0.070494
Annual	ROG_RUNLS	0.1934756	0.7345866	0.3938448	0.4562317	0.4372965	0.194951955	0.073961783	0.000443814	0.2925608	0.0762512	1.766858	0.0695237	0
Annual	ROG_STREX	0.1913074	0.3650898	0.2841172	0.3772633	0.0668598	0.035024058	0.037511191	1.09632E-06	0.1278709	0.0951018	1.8332332	0.0473665	0
Annual	SO2_IDLEX	0	0	0	0	9.037E-05	0.000142292	0.00063797	0.010008431	0.0006149	0	0	0.0035362	0
Annual	SO2_RUNEX	0.0024592	0.0029207	0.0030702	0.0038688	0.0060263	0.005916347	0.00865572	0.011844363	0.0129659	0.0063195	0.0020544	0.0104989	0.0087855
Annual	SO2_STREX	0.0005107	0.0006226	0.0006573	0.0008215	9.887E-05	6.35751E-05	7.13963E-05	3.55695E-07	0.0002105	0.0002272	0.0005973	6.852E-05	0
Annual	TOG_DIURN	0.0499652	0.1618001	0.0834693	0.104069	0.0023924	0.001119316	0.00041816	2.61104E-06	0.0026672	0.0028048	1.4319645	0.0015764	0
Annual	TOG_HTSK	0.086414	0.225036	0.1201844	0.1522157	0.0693882	0.033771174	0.014777615	9.67852E-05	0.0265187	0.0159707	0.7872755	0.0114418	0
Annual	TOG_IDLEX	0	0	0	0	0.0273519	0.019755884	0.020335748	0.498029629	0.0615992	0	0	0.5877605	0
Annual	TOG_RESTL	0.0401494	0.1142076	0.070906	0.0931359	0.0012616	0.000613159	0.000227643	1.60287E-06	0.0011772	0.0011467	0.7584722	0.0007923	0
Annual	TOG_RUNEX	0.0101114	0.0363937	0.0183641	0.0248389	0.0650001	0.064111366	0.011716585	0.048106314	0.042616	3.1108101	2.6116906	0.1099741	0.0802528
Annual	TOG_RUNLS	0.1935917	0.7350273	0.3940811	0.4565054	0.4372965	0.194951955	0.073961783	0.000443814	0.2925608	0.0762512	1.766858	0.0695237	0
Annual	TOG_STREX	0.2096036	0.4000067	0.31129	0.4133425	0.0732031	0.038346935	0.041070033	1.20033E-06	0.1400025	0.1041245	1.995157	0.0518603	0
Summer	CH4_IDLEX	0	0	0	0	0.0045537	0.002777346	0.002627006	0.023685478	0.0085919	0	0	0.087323	0
Summer	CH4_RUNEX	0.0021288	0.0064142	0.0035754	0.00468	0.0044899	0.003286251	0.00088813	0.027816513	0.0055394	3.0425325	0.3087008	0.0066875	0.0032743
Summer	CH4_STREX	0.0389698	0.0632511	0.0545439	0.0676753	0.0129677	0.00690337	0.006757077	2.04342E-07	0.0229107	0.0223864	0.2137359	0.0067519	0
Summer	CO_IDLEX	0	0	0	0	0.1678772	0.126758625	0.286623132	6.346404591	0.4831512	0	0	3.3921972	0
Summer	CO_RUNEX	0.6718832	1.444288	0.9408609	1.0908713	0.6064749	0.44537467	0.122787353	0.238667787	0.7182675	23.599015	18.832855	0.5628972	0.3331045
Summer	CO_STREX	1.7035307	1.9077361	2.1628263	2.4949482	0.8424303	0.453635343	0.76370611	0.004138722	2.4874475	1.5837573	7.9028329	0.7742141	0
Summer	CO2_NBIO_IDLEX	0	0	0	0	9.3581592	14.92008755	67.23807783	1052.827751	63.701705	0	0	378.97922	0
Summer	CO2_NBIO_RUNEX	272.11086	320.05904	334.37657	417.65631	619.97723	614.9266661	911.022875	1272.829712	1335.521	1635.6271	207.41131	1096.5634	929.32761
Summer	CO2_NBIO_STREX	51.649898	62.92991	66.443304	83.08804	9.9086217	6.380643186	7.137174571	0.035552778	20.958077	22.490884	58.436811	6.4152164	0
Summer	NOX_IDLEX	0	0	0	0	0.0826802	0.121917702	0.389589606	5.06332578	0.2145979	0	0	3.3986484	0
Summer	NOX_RUNEX	0.0280097	0.0940928	0.0582614	0.0787008	1.3091179	1.433264131	0.855681654	1.848376656	0.8404265	0.2953035	0.9735285	4.1579413	4.0281165
Summer	NOX_STREX[3]	0.1544099	0.2438047	0.2376668	0.3065529	0.2725695	0.153283811	1.796581904	2.495247894	0.67484	0.2132216	0.2477416	0.7742504	0
Summer	PM10_IDLEX	0	0	0	0	0.0010129	0.001512805	0.000368743	0.002078293	6.674E-05	0	0	0.0027928	0
Summer	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.060417566	0.13034	0.0918981	0.01176	0.7448002	0.13034
Summer	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100668	0.010946027	0.012000003	0.035225137	0.012	0.0202294	0.004	0.0105986	0.016
Summer	PM10_RUNEX	0.0013047	0.0018934	0.0013477	0.0014102	0.0102968	0.013566467	0.009466862	0.024179126	0.0084683	0.0021823	0.0017969	0.0257095	0.1361859
Summer	PM10_STREX	0.0017588	0.0025559	0.0017952	0.0018512	0.0002106	9.84354E-05	8.28075E-05	4.71852E-07	0.0002181	0.0002239	0.0027747	4.794E-05	0
Summer	PM25_IDLEX	0	0	0	0	0.0009691	0.001447362	0.000352791	0.001988387	6.385E-05	0	0	0.0026719	0
Summer	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.025893242	0.05586	0.0393849	0.00504	0.3192001	0.05586
Summer	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025167	0.002736507	0.003000001	0.008806284	0.003	0.0050573	0.001	0.0026497	0.004
Summer	PM25_RUNEX	0.0012018	0.0017423	0.0012406	0.0013009	0.0098328	0.012970752	0.009054989	0.023133139	0.0080878	0.0020674	0.0016796	0.0245874	0.1302946
Summer	PM25_STREX	0.0016172	0.0023502	0.0016506	0.0017022	0.0001937	9.05077E-05	7.61385E-05	4.33851E-07	0.0002005	0.0002059	0.0026088	4.408E-05	0
Summer	ROG_DIURN	0.092411	0.3004602	0.1538291	0.1910835	0.0042442	0.001991577	0.000750934	4.90319E-06	0.0046974	0.0049809	2.749938	0.0027601	0
Summer	ROG_HTSK	0.0964851	0.2626975	0.1350376	0.1681545	0.0783689	0.038223824	0.016691363	0.000106277	0.02873	0.0185244	1.093855	0.0118519	0
Summer	ROG_IDLEX	0	0	0	0	0.0196433	0.014878453	0.014777375	0.461157561	0.046602	0	0	0.4069309	0
Summer	ROG_RESTL	0.074744	0.2153647	0.1301545	0.1692383	0.0024046	0.001167999	0.000445854	3.30486E-06	0.0022654	0.0022658	1.7203704	0.0014667	0
Summer	ROG_RUNEX	0.0077545	0.027671	0.0140193	0.0190131	0.0542184	0.055368784	0.009608999	0.018415253	0.0310306	0.0487059	2.0708739	0.0928205	0.070494
Summer	ROG_RUNLS	0.19018	0.7222288	0.3867896	0.4487595	0.4382743	0.195546185	0.074182136	0.000449203	0.292559	0.0739941	1.737429	0.0635263	0
Summer	ROG_STREX	0.1642963	0.3120517	0.243675	0.3234745	0.0640835	0.033570914	0.035891613	1.04898E-06	0.121682	0.0863448	1.6073261	0.0394336	0
Summer	SO2_IDLEX	0	0	0	0	9.037E-05	0.000142292	0.000637618	0.009885111	0.0006086	0	0	0.0036235	0
Summer	SO2_RUNEX	0.0026586	0.0031278	0.0032672	0.0040789	0.0060265	0.005916388	0.008655749	0.011844366	0.0129662	0.0063196	0.0020525	0.0104991	0.0087855
Summer	SO2_STREX	0.0005048	0.000615	0.0006493	0.000812	9.805E-05	6.31416E-05	7.06281E-05	3.51824E-07	0.0002074	0.0002226	0.0005783	6.348E-05	0
Summer	TOG_DIURN	0.0924663	0.3006404	0.1539213	0.1911981	0.0042442	0.001991577	0.000750934	4.90319E-06	0.0046974	0.0049809	2.749938	0.0027601	0
Summer	TOG_HTSK	0.0965429	0.2628551	0.1351186	0.1682553	0.0783689	0.038223824	0.016691363	0.000106277	0.02873	0.0185244	1.093855	0.0118519	0
Summer	TOG_IDLEX	0	0	0	0	0.0273519	0.019755884	0.019726007	0.527271847	0.0626703	0	0	0.5874511	0
Summer	TOG_RESTL	0.0747888	0.2154939	0.1302326	0.1693398	0.0024046	0.001167999	0.000445854	3.30486E-06	0.0022654	0.0022658	1.7203704	0.0014667	0
Summer	TOG_RUNEX	0.0112836	0.0403843	0.0204362	0.0276549	0.065513	0.064248322	0.011810066	0.048109554	0.0435591	3.1109919	2.5604951	0.1105783	0.0802528
Summer	TOG_RUNLS	0.1902941	0.7226621	0.3870217	0.4490288	0.4382743	0.195546185	0.074182136	0.000449203	0.292559	0.0739941	1.737429	0.0635263	0
Summer	TOG_STREX	0.1800093	0.3418961	0.26698	0.3544098	0.0701634	0.036755925	0.039296798	1.14851E-06	0.1332265	0.0945367	1.7493542	0.0431748	0

Winter	CH4_IDLEX	0	0	0	0	0.004543	0.002771192	0.002945617	0.018584837	0.0084633	0	0	0.0872067	0
Winter	CH4_RUNEX	0.0018546	0.0056563	0.0031317	0.0040923	0.0044277	0.003266732	0.000874173	0.000819608	0.0054162	3.0424922	0.3105787	0.006602	0.0032743
Winter	CH4_STREX	0.0448619	0.0733484	0.06291	0.0781049	0.0133912	0.007129132	0.006964358	2.12516E-07	0.0239298	0.0244988	0.2370663	0.0082436	0
Winter	CO_IDLEX	0	0	0	0	0.1678772	0.126758625	0.388116692	6.514513971	0.4910392	0	0	3.4792571	0
Winter	CO_RUNEX	0.539678	1.180697	0.7614855	0.884759	0.5991695	0.443274557	0.121271705	0.153089453	0.703653	23.59702	18.300696	0.5534118	0.3331045
Winter	CO_STREX	2.0132412	2.2625156	2.5675453	2.9698032	0.8802741	0.47392663	0.800617995	0.004338734	2.6656906	1.8457548	8.4278924	1.1017425	0
Winter	CO2_NBIO_IDLEX	0	0	0	0	9.3581592	14.92008755	67.34688641	1077.398907	65.285763	0	0	356.97711	0
Winter	CO2_NBIO_RUNEX	248.26101	295.28652	310.81441	392.53295	619.96429	614.9229798	911.0202216	1253.680895	1335.4953	1635.6235	206.64372	1096.5466	929.32761
Winter	CO2_NBIO_STREX	52.236878	63.676368	67.227734	84.02981	9.9762095	6.416799952	7.200173203	0.035869944	21.259945	22.933868	59.88215	6.9638689	0
Winter	NOX_IDLEX	0	0	0	0	0.0826802	0.121917702	0.40772782	5.618352499	0.2412289	0	0	3.2104368	0
Winter	NOX_RUNEX	0.029509	0.100183	0.0616871	0.0832989	1.3670637	1.49381553	0.892924017	1.918074232	0.8881268	0.3014555	1.0889414	4.3545929	4.1977547
Winter	NOX_STREX[3]	0.164118	0.2593714	0.2526727	0.3259915	0.2794792	0.157150746	1.798611157	2.495251484	0.6823205	0.2222737	0.2604454	0.7802853	0
Winter	PM10_IDLEX	0	0	0	0	0.0010129	0.001512805	0.000523924	0.002699758	8.667E-05	0	0	0.0040108	0
Winter	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.060043994	0.13034	0.0918981	0.01176	0.7448002	0.13034
Winter	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100668	0.010946027	0.012000003	0.035007311	0.012	0.0202294	0.004	0.0105986	0.016
Winter	PM10_RUNEX	0.0013047	0.0018934	0.0013477	0.0014102	0.0102968	0.013566467	0.009466862	0.024151342	0.0084683	0.0021823	0.0017969	0.0257095	0.1361859
Winter	PM10_STREX	0.0017588	0.0025559	0.0017952	0.0018512	0.0002106	9.84354E-05	8.28075E-05	4.71852E-07	0.0002181	0.0002239	0.0027747	4.794E-05	0
Winter	PM25_IDLEX	0	0	0	0	0.0009691	0.001447362	0.000501259	0.002582967	8.292E-05	0	0	0.0038373	0
Winter	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.02573314	0.05586	0.0393849	0.00504	0.3192001	0.05586
Winter	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025167	0.002736507	0.003000001	0.008751828	0.003	0.0050573	0.001	0.0026497	0.004
Winter	PM25_RUNEX	0.0012018	0.0017423	0.0012406	0.0013009	0.0098328	0.012970752	0.009054989	0.023106557	0.0080878	0.0020674	0.0016796	0.0245874	0.1302946
Winter	PM25_STREX	0.0016172	0.0023502	0.0016506	0.0017022	0.0001937	9.05077E-05	7.61385E-05	4.33851E-07	0.0002005	0.0002059	0.0026088	4.408E-05	0
Winter	ROG_DIURN	0.0488148	0.1633364	0.0798345	0.0974958	0.0024967	0.001135244	0.000435792	2.68249E-06	0.0027829	0.0028434	1.6393559	0.0014837	0
Winter	ROG_HTSK	0.0944738	0.2576047	0.1320133	0.1644796	0.0804822	0.03841713	0.016334791	0.000107927	0.028432	0.0178481	1.0540129	0.0117059	0
Winter	ROG_IDLEX	0	0	0	0	0.0196433	0.014878453	0.015676089	0.400126443	0.0443619	0	0	0.4075779	0
Winter	ROG_RESTL	0.0401785	0.1138154	0.071025	0.0934274	0.0013209	0.000634648	0.000238868	1.72859E-06	0.0012515	0.0012014	0.7628485	0.0008183	0
Winter	ROG_RUNEX	0.0068278	0.0245071	0.0123808	0.0167676	0.0539028	0.055285876	0.009550806	0.017311118	0.0304402	0.0485932	2.0925849	0.0924026	0.070494
Winter	ROG_RUNLS	0.2190298	0.8575349	0.4555568	0.5238872	0.4706234	0.210639325	0.08059738	0.000472322	0.3114386	0.0890146	2.0230662	0.0843655	0
Winter	ROG_STREX	0.1911347	0.3645853	0.2838611	0.376922	0.0663485	0.034760684	0.037229432	1.08808E-06	0.1274435	0.0945968	1.7917479	0.0482208	0
Winter	SO2_IDLEX	0	0	0	0	9.037E-05	0.000142292	0.000638416	0.010178731	0.0006236	0	0	0.0034157	0
Winter	SO2_RUNEX	0.0024256	0.0028857	0.0030369	0.0038333	0.0060263	0.005916352	0.008655723	0.011844363	0.0129659	0.0063195	0.0020449	0.0104989	0.0087855
Winter	SO2_STREX	0.0005105	0.0006223	0.000657	0.0008212	9.872E-05	6.34994E-05	7.12516E-05	3.54962E-07	0.0002104	0.0002269	0.0005926	6.891E-05	0
Winter	TOG_DIURN	0.0488441	0.1634344	0.0798823	0.0975543	0.0024967	0.001135244	0.000435792	2.68249E-06	0.0027829	0.0028434	1.6393559	0.0014837	0
Winter	TOG_HTSK	0.0945304	0.2577593	0.1320924	0.1645782	0.0804822	0.03841713	0.016334791	0.000107927	0.028432	0.0178481	1.0540129	0.0117059	0
Winter	TOG_IDLEX	0	0	0	0	0.0273519	0.019755884	0.021193826	0.455513497	0.0601201	0	0	0.5881877	0
Winter	TOG_RESTL	0.0402026	0.1138837	0.0710676	0.0934835	0.0013209	0.000634648	0.000238868	1.72859E-06	0.0012515	0.0012014	0.7628485	0.0008183	0
Winter	TOG_RUNEX	0.0099311	0.0357655	0.0180442	0.0243809	0.0650526	0.064127342	0.011725152	0.019738418	0.0426976	3.1108276	2.5860036	0.1099684	0.0802528
Winter	TOG_RUNLS	0.2191612	0.8580494	0.4558302	0.5242015	0.4706234	0.210639325	0.08059738	0.000472322	0.3114386	0.0890146	2.0230662	0.0843655	0
Winter	TOG_STREX	0.2094144	0.3994539	0.3110094	0.4129687	0.0726433	0.038058574	0.040761542	1.19131E-06	0.1395346	0.1035715	1.9500346	0.0527957	0

1 Source: California Air Resources Board. EMFAC2017 Web Database. https://www.arb.ca.gov/emfac/2017/; California Air Pollution Control Officers Association (CAPCOA). 2017, November. California Emissions Estimator Model User's Guide, Version 2016.3.2, Appendix A.

2 Unless otherwise noted, per CalEEMod methodology, the calculated CalEEMod emission rates are derived from the emission rates obtained using the EMFAC2017 Web Database for the Los Angeles (SC) region .

3 Because EMFAC2017 provides vehicle trips data for MHDT and HHDT diesel trucks, the formula provided in Appendix A of the CalEEMod User's Guide in calculating the NO_x STREX emission rates are utilized.